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GUEST EDITORIAL

The World Medical Association
First Western Hemisphere Conference

THE World Medical Association in collaboration with the Pan American Medical Association will hold its First Western Hemisphere Conference at Richmond, Virginia, April 22-25, 1953. It will offer the members of the United States Committee an opportunity to get together in this country with foreign representatives.

The theme of the meeting will be "75 Years of Medical Progress." There will be panel discussions on the outstanding advances in medicine during the last 75 years; and a discussion of differences and similarities in medical practice in Latin America and the United States. A representative from each Latin American country has been invited to attend.

Papers will be prepared by outstanding specialists and a general practitioner in all the fields of medicine. These papers will be published in one volume.

On Wednesday afternoon, April 22nd, there will be a program devoted to problems of the World Medical Association. All members of the United States Committee are invited.

On Thursday, April 23rd, there will be panel discussions and a general session summing up the panel discussions. This will be followed by a tour of Richmond, a reception and buffet supper.

On Friday, April 24th, there will be further panel discussions, a reception and a dinner meeting followed by reports of the panel discussions and entertainment. A guest speaker will make an address on a medical topic of international importance.

On Saturday, April 25th, there will be a tour to Williamsburg, a national shrine of the early days of the country.

All this is made possible by the courtesy of the A. H. Robins Company, which is underwriting the costs of the meeting.

An evening session will be devoted to problems of The World Medical Association, as they pertain to the component members in the Western Hemisphere. Members of the United States Committee are invited to attend this meeting.

The World Medical Association is an organization of national medical associations of 43 countries. It is devoted to advancing the standards of medical education and medical care on a world basis. It effects liaison among the physicians of the free world and it is the only organization which can speak for the practicing physician from the standpoint of free enterprise before other international organizations (not devoted to a particular phase of medical science). More and more problems in health and medicine are being discussed and decided on an international level. Without The World Medical Association, these problems will be considered only from the governmental viewpoint.

The other international organization particularly concerned with health and medicine is the World Health Organization, which is a branch of the United Nations, representing governments in the field of health and medicine, more particularly public health, and is supported wholly by government funds.

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The World Medical Association on the other hand represents the doctors of the world, is non-governmental and is supported by dues and contributions.

While no individual, but only national association memberships are possible in The World Medical Association, itself, individual memberships are available in the United States Committee, Inc. This is a non-profit corporation. Organizational and individual memberships may be had. All dues and contributions are exempt from income tax. The United States Committee has guaranteed to underwrite certain expenses of the Association, including support of the headquarters, publication of the quarterly Bulletin and some of the Council expenses. All members of the Committee are entitled to the Bulletin, all other publications of the Association, assistance in making medical tours in other countries, and may attend the General Assemblies of the Association as Observers.

The General Assembly meets annually, usually in a different country each year. It is a sort of House of Delegates. The interim governing body is the Council, composed of the President, the President-Elect, the Treasurer and ten elective members. The Council is comprised of men of different nationalities—the President from Greece, the President-Elect from Holland, the Treasurer from Switzerland and the elective members are as follows:

Two from the United States;

One each from Australia, Belgium, Cuba, France, India, Spain, Sweden and the United Kingdom.

The Council meets twice a year.

The Association has undertaken a number of studies, such as:

Undergradute Medical Education

Postgraduate Medical Education

Status of the Medical Profession

Hospitals

Availability of Certain Pharmaceuticals and Biologics

Social Security as it Affects Medical Practice

International Code of Medical Ethics, including a modified Hippocratic Oath

A Statement on the Medical Aspects of Social Security to Combat the Propositions of the International Labour Organization

In August 1953, the Association will sponsor the First World Conference on Medical Education, which will be held in London, immediately preceding the 7th General Assembly of the Association, which will be held at The Hague. This will be the first time such a conference has been held on a global basis. The scope of the Conference will be limited to Undergraduate Medical Education. The four main themes are:

Requirements for Entry into Medical Studies, including the Selection of Students,

The Aims and Content of the Medical Curriculum,

Teaching Methods and Techniques,

The Concepts and Place in the Curriculum of Preventive and Social Medicine.

The World Medical Association has shown that doctors the world over have similar problems, differing only in degree, and that they think alike about these problems, differing only as to detail.

The Association needs your support. Further information may be obtained from the Secretariate, 2 East 103rd Street, New York 29, New York.

LOUIS H. BAUER, M.D., *Secretary-General,*
The World Medical Association.

MEDULLARY NAILING IN FRACTURES*

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Richmond, Virginia

The principle of medullary fixation of fractures was first published by Nicolaysen in 1897[3]. The next published report was by Delbat in 1906[3]. Lambotte in 1910[1] reported a fractured clavicle he had treated by this method in 1907. All of these surgeons used thin nails. Hey Groves in 1916 first introduced the use of heavy nails that filled the medullary cavity.

The advent of sulfonamides and improvement in the metal revived interest, and in 1937[4] Rush began reporting the use of flexible rods as a means of fixation. In 1940[2] Kuntschner reported his first results. It was following these reports, with the advent of the antibiotics, that the procedure became more popular. In January 1951,[6] a committee of the American Academy of Orthopædic Surgeons reported the end results of 700 cases of medullary nailing of fractured femurs performed by orthopædic surgeons over the entire country. The results of this report were so excellent that the method is firmly established as an efficient method of treating femoral fractures.

This paper is based on 66 cases. The longest follow-up is 5 years. Medullary nailing is especially useful in femoral fractures from 2 inches below the lesser trochanter to 4 inches above the adductor tubercle. In this area it may be used as the only means of immobilization and, therefore, allow early exercise of the muscles and adjacent joints. Elimination of the need for casts, traction and other external immobilization has the following advantages:

1. It allows physiologic muscle tone to exert contact compression of the fractured fragments while position is maintained.
2. Solid union is more assured.
3. Early ambulation.
4. Shorter hospitalization.
5. Shorter disability.
6. Less permanent disability.
7. Psychologically another distinct advantage is observed. This is a feeling of well being experienced by these patients and, not uncommonly, by their orthopædic surgeons. This has been referred to as "Medullary Nail Euphoria".

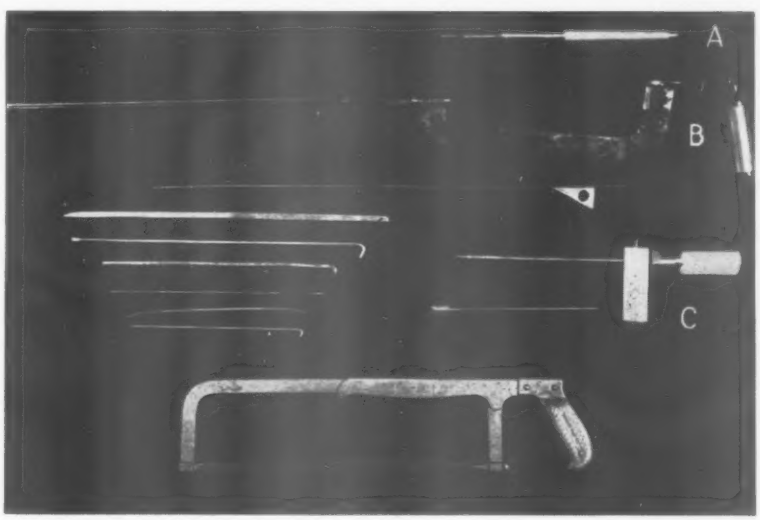

Fig. 1. From top to bottom are illustrated: A. Driver; B. Extractor; C. Reamer and hacksaw. On the left are the various types of nails

The technique of the operation requires especially made nails—Figure 1. It is necessary that these be of various sizes and that the proper size be selected.

*Read before the annual meeting of The Medical Society of Virginia, at Richmond, September 28—October 1, 1952.

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It is also very important to have the special instruments for driving and extraction, as there are records of these nails having become lodged in the medullary cavity and defeat all efforts at extraction. The size of the nail should be determined prior to operation by x-ray and actual measurement. Measure the distance from the top of the greater trochanter to the middle of the patella and add 3 cm. to allow the end to protrude for extraction.

The patient is placed on his side with the injured extremity up—Figure 2. The leg is flexed on the body and is slightly adducted in order to make the top of the greater trochanter more accessible. The patient is held in this position with sand bags or, at times, they can be strapped. Operative exposure is obtained by 2 incisions. One about 4 inches long over the fracture site and the other approximately 2 inches long over the greater trochanter.

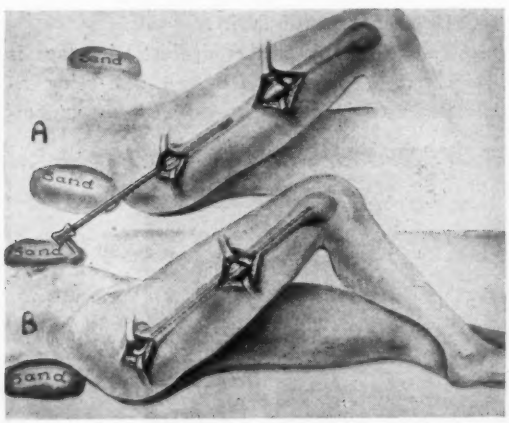

Fig. 2. Patient placed on the side with the injured leg up, hip and knee flexed.
A. Nail being driven.
B. Nail in place.

The diameter should always be checked at the time of operation by introducing the nail into the fractured fragments a short distance above and below the fracture. A snug fit is desirable, but most of the difficulties are encountered when the nail is too large. The average diameter is 10 mm., but do not hesitate to use 9 mm. if it is a safer fit. Occasionally it is necessary to ream out the fracture site to get rid of any obstruction. This is especially true in old fractures or nonunion. The nail is driven through a small opening in the top of the greater trochanter very slowly and cautiously until the end of the nail appears at the fracture site. In driving always be sure to use light strokes and check to be certain that the nail is not becoming lodged too tightly. It is better to occasionally use the extractor to determine if the nail can be extracted following every 2 to 3 strokes.

I have never had a nail become irretrievably lodged in a medullary cavity, but I still feel safer with the hack saw in the sterile setup. When the nail can be seen at the fracture site it is then reduced and held in place with a Lowman bone-holding clamp, or by manual means, and the nail driven across the fracture site and on down until the lower end of the nail is even with the adductor tubercle. In comminuted fractures the fragments may be held to the distal or proximal bone by screws or wire. Screws make a firmer fixation. It is not necessary, nor is it desirable, to screw the comminuted fragment to both of the larger fractured ends. Before closing, always get lateral and AP x-rays that include the knee joint. This will avoid driving a nail into the joint, which is a complication that has been reported. The distal end of the nail should be even with the adductor tubercle. It is ideal to have approximately 3/4 inch of the nail protruding above the greater trochanter to retract the nail, if necessary, later.

Case No. 1. My first femoral case was done

Fig. 3. Case No. 1. Non-union, 2 years duration; one previous bonegraft failed.

July, 1948. It was a nonunion of the femur of 2 years duration—Figure 3. The patient had had adequate immobilization in plaster for approximately 4 months, followed by a bonegraft. This was done approximately 9 months before I saw the patient. The bonegraft was also followed by adequate immobilization, but the fracture failed to unite. At the time of my examination there was marked atrophy of the leg with a stiff knee as a result of the continued immobilization in plaster. I had the brace maker prepare 2 stainless steel rods. The smaller one produced a snug fit and there was good immobilization. The fractured ends were step-cut and iliac bone was used to supplement the rigid fixation supplied by the rod. The patient was discharged at the end of 2 1/2 weeks on crutches, with no cast or brace. He had full weight bearing at 6 months—Figure 4—and the nail was removed under local anesthesia at 9 months. The patient, at this time, is working as a heavy laborer in a barrel stave mill.

Fig. 4. Case No. 1. Solid union 6 months after medullary nailing and iliac bonegrafts.

I would like to point out that the use of medullary nails in femoral fixation has changed the requirements for a satisfactory bonegraft. It was, at one time, required that the bonegraft have rigidity and osteogenic properties. We can depend upon the use of the medullary pin for perfect rigidity and immobilization and use the osteogenic iliac bone in small grapenut size pieces, which are much more osteogenic than cortical bone.

Case No. 2. L. W., 28 year old, male. Bilateral femoral fracture. The left leg was comminuted and compounded posteriorly—Figure 5. Through a 12 inch wound from the gluteal folds to the popliteal space 8 inches of femur was protruding. The patient was treated for shock and the compound fracture debrided. The 5 inch comminuted fragment was held in place by 1 oblique screw and a medullary nail was put in place. This gave excellent immobilization. The wound was closed in layers. At the end of one week the right side was nailed. The compound wound healed kindly and the patient was discharged in a wheelchair 35 days after admission. He was started on crutches 1 month later. Both fractures were united in 163 days and Figure 6 shows the fractures at 7 months.

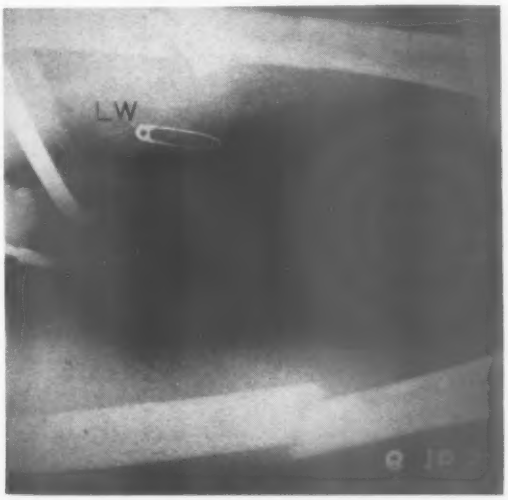

Fig. 5. Case No. 2. Bilateral fracture; left side severely compounded and comminuted.

Case No. 3. P. M., 15 year old, male. Fractured femur—Figure 7. Traction was applied initially

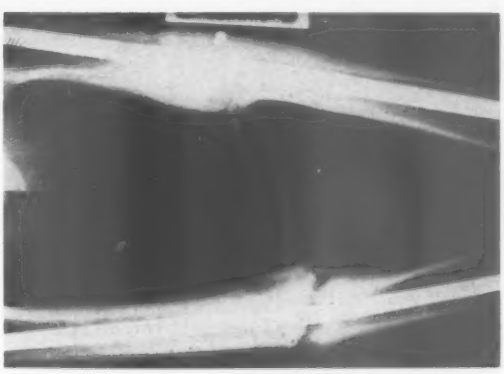

Fig. 6. Case No. 2. Right side, pin bent slightly.

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and 3 manipulations under anesthesia failed to give a satisfactory reduction. A medullary nail was inserted and he was discharged on crutches 14 days later; 20 days after admission. Union was solid in 59 days—Figure 8. He returned to work with full knee motion in 60 days and no permanent disability. Figure 9 shows the fracture at 3 months.

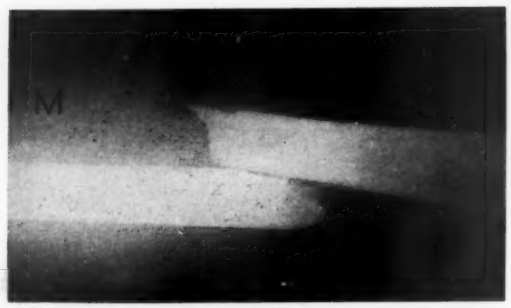

Fig. 7. Case No. 3. Before Nailing.

Fig. 8. Case No. 3. 59 days, well healed, full weight bearing.

Following this the method was used on 32 femurs, 7 of which were old non-unions and 4 were compound fractures. All of these cases united except 7, which were done too recently for follow-up. The control series in both of these charts, Tables No. 1 and 2, is represented by the solid bar. These were fresh fractures treated by the conventional method of traction and casts[5].

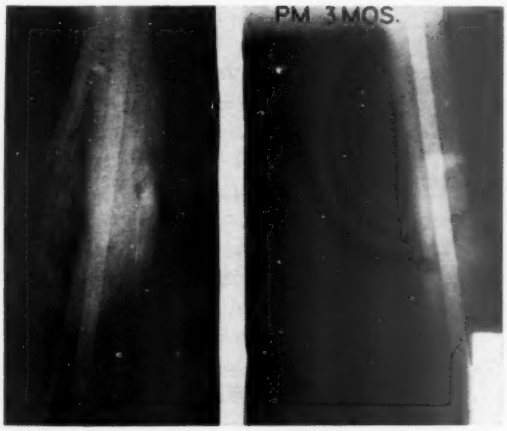

Fig. 9. Case No. 3. 3 months.

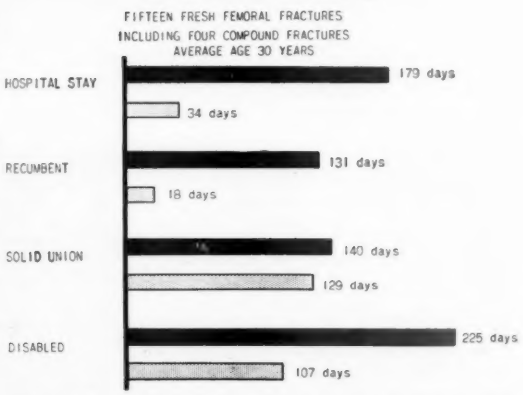

Table 1. The solid bar represents fresh femoral fractures treated by the conventional method of traction and casts. The gray bar represents fresh fractures treated by medullary nailing.

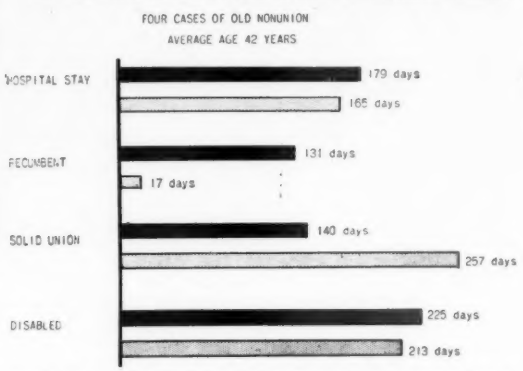

Table 2. The solid bar represents fresh femoral fractures treated by the conventional method of traction and casts compared with old established nonunions in femoral fractures shown in gray.

The first graft, Table No. 1, shows fresh fractures treated by medullary nailing compared to the conventional method. The second graft, Table No. 2,

shows a comparison between fresh fractures treated by the old method and old established nonunion cases treated by medullary nailing. It can be seen that medullary nailing in old established nonunion cases compares favorably with fresh fractures treated by the conventional method. Medullary nailing is a very useful method in many other areas of the body—Table No. 3.

Table No. 3. Total Cases Treated

Femurs		32
Fresh fractures	25	
Established Non-unions	7	
Humeral Fractures		6
Fresh fractures	5	
Established Non-unions	1	
Forearm Fractures		18
Fresh fractures	15	
Established Non-unions	3	
Clavicle Non-unions		3
Tibia 2 cases		2
Compound	1	
Old Non-union	1	
Knee Fusion 3 cases		3
Rotating Osteotomy of Radius		1
Femoral Shortening		1
		66

Case No. 4. H. Y., 24 year old, male. Compound fracture, both bones of forearm—Figure 10. The compound wound was debrided. A Steinman pin was inserted down the ulna and a Kirschner wire

Fig. 10. Case No. 4. Fracture both bones of forearm; ulna compounded.

inserted into the styloid of the radius. An incision about 2 inches long was used at the fracture site to reduce the fracture. The cast was removed and he returned to work in 3 months—Figure 11. The pins were removed 1 month later and he had almost complete motion, lacking 15 degrees of rotation.

Case No. 5. F. A., 32 year old, female. Osteomyelitis in right humerus at the age of 5. As a result the middle third of the humerus was missing—Figure 12A. A fibula graft with iliac chips was step-cut and held in place by a medullary nail with no fixation other than a sling. The top portion united but after 8 months the bottom junction was freshened up, iliac chips added and the step-cut ends held together by a wire suture—Figure 12b. No external immobilization was used. This united and the pin was removed 9 months later—Figure 13. The patient has excellent function and is working as a hair-dresser. Elbow motion is good; shoulder motion 50% and still improving. Her hand has normal motion and power.

Fig. 11. Case No. 4. 3 months with pins; 7 months pins out.

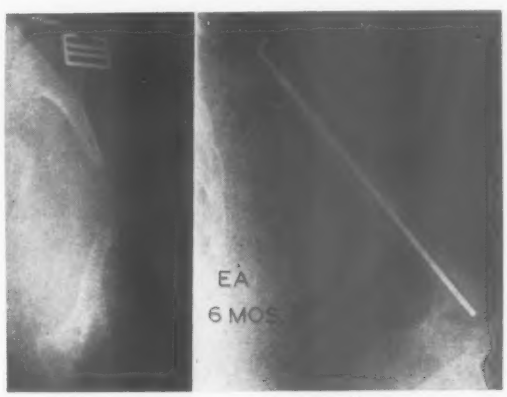

Fig. 12. Case No. 5. a. Absent middle 1/3 of humerus. b. Pin in place after bone graft.

Case No. 6. L. M., 30 year old, male. Severe compound, comminuted fracture upper third of humerus with radial nerve involvement—Figure 14. Wound debrided and sutured. Side arm traction applied. 2 weeks later a medullary nail was placed

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Fig. 13. Case No. 5. 9 months. Solid bone.

across the fracture and iliac bone added. The nerve was sutured at this time. External immobilization was used. This united in 2 months—Figure 15. Tendon transplants were done for the wrist drop. He now has a very useful arm with fair elbow and shoulder motion.

Fig. 14. Case No. 6. Compound comminuted fracture.

Case No. 7. R. J., 47 year old, male. Charcot joint, disabling 5 years because of instability—Fig-

Fig. 15. Case No. 6. Good early union. Screws used to hold comminuted fracture in place.

Fig. 16. Case No. 7. Charcot knee.

Fig. 17. Case No. 7. Solid union; 6 months.

ure 16. A knee fusion was done using a medullary nail and a cylinder cast. The cast was worn 6 months, but he was on crutches all except 2 weeks of this time. It was united solidly at this time—Figure 17. He works daily at heavy labor.

All of these cases united promptly except one. This was a fracture of the ulna and the head of the radius that required removal. The ulna was treated by medullary nailing. Although the fracture was not united, the pin was left in place and the patient has worked daily for 2 years as an anesthetist. She has a full range of motion and very few symptoms. Recent x-rays reveal the fracture has united. I think this can be considered slow union and a clinical good result before union took place. In some of these cases, forearm and tibia, external fixation is required, but the medullary nail helps prevent displacement with a minimal disturbance of the circulation at the fracture site. This group of 66 cases all united. 5 of these have been done too recently for a proper follow-up. These appear to be progressing satisfactorily.

COMPLICATIONS

1 case: Phlebitis which responded to treatment.

1 case: Nail driven into knee joint after x-ray check. It was retracted with no untoward effects.

2 cases: Nail bent slightly. No disturbance of function.

1 case: Wound infection. A compound double fracture of the tibia.

SUMMARY

1. In the hands of those experienced with the technique, medullary nailing is a useful adjunct in the treatment of many fractures and orthopædic cases.

2. It is especially helpful in forearm and humeral fractures.

3. It is the treatment of choice in most fractures of the shaft of the femur.

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2222 Monument Avenue.

Last Call for Palace!

This June may be your last chance to wander at will through New York's Grand Central Palace! The AMA's scientific and technical exhibitions will be one of the last of the "private" meetings to be held there. Some time in the fall the Palace will be taken over by the US Bureau of Internal Revenue for office space. The 1953 Technical Exposition will feature displays from more than 350 manufacturing, drug and publishing firms, while the Scientific Exhibit will present approximately 260 clinical and diagnostic exhibits.

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TRENDS IN THE SURGICAL TREATMENT OF PULMONARY TUBERCULOSIS— A Study of 106 Cases of Pulmonary Resection*

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and
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In the past 10 or 12 years, the change in viewpoint towards pulmonary tuberculosis and the change in methods of treatment has been striking. It has long been recognized that artificial pneumothorax was a valuable method of treating pulmonary tuberculosis. However, the obvious difficulties, and dangerous side-effects were tolerated because no better method was available. Thoracoplasty produces satisfactory permanent collapse, and has resulted in the arrest of disease in thousands of patients. However, it does not remove the disease. It is possible that neither of these methods will ever be entirely abandoned. At the present state of our knowledge, it appears that pneumothorax because of its late complications of unexpandable lungs, tuberculous empyema, and chronic unhealed parenchymal lesions is better replaced with pneumoperitoneum. Similarly, in good risk patients with small residual lesions, resection seems more satisfactory than thoracoplasty. In patients with far advanced disease, lobectomy or pneumonectomy may save lives that thoracoplasty could not save. Patients whose thoracoplasty failed to produce arrest of disease, may frequently be salvaged by pulmonary resection.

To anyone who has performed many thoracoplasties, the indirect effect of such a large mutilating operation is to stimulate the surgeon to seek a better method. To remove the diseased area has always been an attractive idea, but one that was beyond reach until the advent of the antibiotics.

The large scale studies of the Veterans Administration and independent investigators have well established the optimum dosage and proper interval of administration for streptomycin and PAS (Para-aminosalicylic acid). These drugs have vastly improved the outlook for the patient and have brought many patients (otherwise hopeless) to the point where surgical therapy might be applied.

*Read before the annual meeting of the Medical Society of Virginia in Richmond, September 28-October 1, 1952.

Certain factors in the healing of tuberculosis must be considered in treating the disease and in resecting infected pulmonary tissue.

Without streptomycin and PAS, if a cavity healed, it almost invariably did so by the blockage of its bronchial opening with tuberculous granulation tissue. This often resulted in sound healing with a loculated, inspissated cavity containing live tubercle bacilli. In some cases, these blocked cavities remained sealed off during the life-time of the patient, especially after proper collapse therapy. Frequently, the sealing of the bronchus was insecure, and with physical trauma, or trauma due to intercurrent disease, the tuberculous infection again became active.

With the use of streptomycin, the tuberculous granulation tissue at the broncho-cavitary junction healed and became covered with epithelium. The epithelium then spread into and lined the inner walls of the cavity. This resulted in a cavity wall, infected with tubercle bacilli but lined with epithelium —a situation in which permanent healing is difficult. To complete the healing, so well started by streptomycin and PAS, the residual lesion must be resected in many cases.

The reported studies show that with the operative safety afforded by the antibiotics, with improved surgical methods, with expert anesthesia and plentiful blood for transfusions, the more quiescent lesions of pulmonary tuberculosis can be safely attacked.

The present series of 106 cases is a review of the work for the last two years, July 1, 1950, to June 30, 1952. All of these patients have been discharged from the Sanatorium. These cases are being studied critically with a view to selecting future cases with greater knowledge and judgment, and to adopt the various surgical procedures accurately to the needs of the particular patient. The 106 cases comprise only those cases which have had pulmonary tissue removed as a part of their treatment for pulmonary

tuberculosis. Only these cases which were observed prior to operation, or postoperatively, or both, at one of the state sanatoria (Blue Ridge Sanatorium) are reported. Most of these patients were admitted first to Blue Ridge Sanatorium, others were sent directly to the University Hospital from other Sanatoria, or from their homes, and later followed at Blue Ridge Sanatorium. No type of surgery other than resection, is considered in this study.

Table I shows the distribution of the patients in age, sex, type of operation and the use of the drugs.

The amount of streptomycin given is shown in Table II.

The amount of streptomycin given pre-operatively is shown in Table II. Cases that received less than 10 grams of streptomycin were arbitrarily considered to have had no streptomycin. There were 68 cases who received streptomycin and 5 (7.4%) developed tuberculous complications. There were 26 cases who did not receive streptomycin and 7 (26.9%) developed tuberculous complications. There were almost four times as many tuberculous complications in cases that did not receive streptomycin in the preoperative period. Of the 26 cases that did not receive streptomycin, 24 (92.3%) were pneumonectomy and lobectomy cases. The majority of all tuberculous complications occurred in pneumonectomy and lobectomy cases as can be seen in Table V.

According to sex, complications are about twice as frequent in males as females. Table III shows that there were 39 males and 67 females in the series. The usual sanatorium population is approximately 45% male and 55% female.

Table III
Relation of Sex to Complications

Sex	Total Patients		Complications in Each Group	
	#	%	#	%
Male	39	36.8	10	25.8
Female	67	63.2	9	13.4
Total	106	100.0	19	17.9

The indications for operation are shown in Table IV. The greater the extent of lung destruction, the more radical the operation must become; therefore, the patients who had lobectomy and pneumonectomy were, in general, those with far advanced disease. Many of these would not have been salvaged by the older methods of treatment.

Table I
Pulmonary Resection—106 Cases

	Pneumonectomy	Lobectomy	Segmental	Wedge	Total
Total Patients	29	36	16	25	106
Men	9	16	7	7	39
Women	20	20	9	18	67
Age	15-72	16-70	20-60	16-50	
No Chemotherapy	12(+3)*	12(+3)*	0(+1)*	2(+1)*	34
Chemotherapy	14	21	15	22	72

*Refers to cases who probably did not receive streptomycin

Table II
Relation to Pre-Op Streptomycin to the Incidence of Complications

Amt. of Streptomycin	Number of pts.	Complications	
		#	%
10-30 Gms.	43	6	14.0
31-60 Gms.	25	2	8.0
60 or more Gms.	4	1	25.0
None	26	7	26.9
Unknown	8	3	37.5
Totals	106	19	17.9

Table IV
Indication for Operation and Its Relationship to the Incidence of Complications.

Indication for Operation	Total No. Cases		Cases with Complications	
	#	%	#	%
Lower lobe cavity or residual caseous lesion	30	28.4	7	23.3
Upper lobe cavity or residual caseous lesion	25	23.6	1	4.0
Destroyed lung or lobe	18	17.0	5	27.8
Thoracoplasty failure	13	12.3	2	15.4
Tuberculoma	11	10.4	0	
Bronchial disease	10	9.4	2	20.0
Giant upper lobe cavity or lesion close to mediastinum	4	3.8	2	50.0
Other	5	4.7	19	17.9
Total	106	100	19	17.9

Percentages in the second vertical column are expressed in terms of the total of 106 cases. Percentages in the fourth vertical column are expressed in terms of the number of cases comprising each indication listed with the exception of the lowest figure to which the first statement applies.

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The single patient who developed a tuberculous wound infection, did so nearly one year after operation. Perhaps with a long post-operative course of streptomycin this might have been avoided.

Complications consisted of post-operative spread of disease, empyema, bronchopleural fistula or tuberculous wound infection. The incidence of these complications is shown in Table V. Most of these patients made ultimate complete recovery.

other sanatoria to complete their convalescence.

When these figures are compared with similar series of cases in the literature (Table VIII) it can be seen that the mortality in this series is extremely favorable, as is also the percentage of complications. Most of the patients with complications recovered satisfactorily.

A number of other operative cases, still in the Sanatorium will be included in a later report. The

TABLE V
Complications

Type of Resection	Pts. with Complications	Types of Complications					
		Spread or Exacerbation	Empyema tbc. or non tbc.	Broncho-pl. fist.	Bron. stump ulcer	Tbc. wound infection.	Other
Pneumonectomy Cases (29)	20.7% (6)	13.8% (4)	3.5% (1)	6.9% (2)	3.5% (1)		
Lobectomy Cases (36)	27.8% (10)	8.3% (3)	13.9% (5)	16.7% (6)	5.6% (2)	2.8% (1)	5.6% (2)
Segmental Resection Cases (16)	12.5% (2)		6.3% (1)	12.5% (2)			
Wedge Resection Cases (25)	4.0% (1)	4.0% (1)					
Total Cases (106)	17.9% (19)	7.5% (8)	6.6% (7)	9.4% (10)	2.8% (3)	.9% (1)	1.9% (2)

The fate of the patients who sustained these untoward effects is shown in Table VI. Of the 19 patients who developed complications, four are dead, and four others still have active disease. The remaining eleven have arrested disease.

TABLE VI
Complications: The End Results

Type of Resection	Total Complications	Arrest Disease	Active Disease	Dead Tuberculosis or Non-Tuberculosis
Pneumonectomy	6	2	2	2
Lobectomy	10	6	2	2
Segmental Resection	2	2		
Wedge Resection	1	1		
Totals	19	11	4	4

Table VII shows the result of treatment on discharge from the Sanatorium. It must be noted that not all of these patients were discharged to their homes. Some returned to other Sanatoria to complete their cure. Of the entire group, 27 patients (25.5%) were reported as still having active disease. Most of this group consists of those patients who were progressing satisfactorily, but were discharged to

total of the new series is already approximately 50 cases. In this later series, the morbidity and mortality are significantly lower.

DISCUSSION

A careful study of the results and review of the x-ray films after the fate of the patient was known, has revealed certain facts.

Most of these patients received what we now believe was quite inadequate drug therapy both prior to operation and postoperatively. Considering this, the results are remarkably good.

We now believe that a minimum period of 3 months of combined streptomycin and PAS is absolutely necessary in the pre-operative period. At the present time, most of our cases receive 6 months or more of combined drug therapy. A minimum of 3 or 4 months of combined drug therapy is essential in the post-operative period. The amount of streptomycin and PAS a patient should receive either preoperatively or post-operatively is obviously a matter which will vary with each case.

Most, but not all, of the patients in this series were bronchoscoped. All of them should have had

XUM

TABLE VII
Result of Treatment on Discharge From Sanatorium

Type of Resection	Arrest of Disease	Inactive Disease	Active Disease	tbc. Dead	Non tbc. Dead	TOTAL DEAD
Pneumonectomy	62.1%	3.5%	24.1%	6.9%	3.5%	10.3%
Cases (29)	(18)	(1)	(7)	(2)	(1)	(3)
Lobectomy	72.2%		25.0%	2.8%		2.8%
Cases (36)	(26)		(9)	(1)		(1)
Segmental Resection	68.8%		31.3%			
Cases (16)	(11)		(5)			
Wedge Resection	72.0%	4.0%	24.0%			
Cases (25)	(18)	(1)	(6)			
Total	68.9%	1.9%	25.5%	2.8%	.9%	3.8%
Cases	(73)	(2)	(27)	(3)	(1)	(4)

TABLE VIII
Comparable Series

Author	Number of Cases: No Specific Chemo-Therapy	Number of Cases: Specific Chemo-Therapy	Total Deaths #	Total Deaths %	Post-Operative Mortality #	Post-Operative Mortality %	Spread of Exacerbation #	Spread of Exacerbation %
Overholt	196		46	24	27	14	54	28
Sweet	63		28	44	9	16	20	32
Moore		74	6	8	6	8	3	4
Day	202		25	12	14	7	25	12
Present Study	34	72	4	3.8	3	2.8	19	17.9

the benefit of this examination. Bronschoscopy in tuberculous patients is of value early in their sanatorium stay to determine the presence or absence of tuberculous bronchitis, and to plot the patient's future treatment with this knowledge in mind.

Later, in the pre-operative period, bronchoscopy is useful in determining whether or not bronchial stenosis and obstruction exists, and to determine its degree, if present. This is important in the decision as to the amount of lung tissue that must be sacrificed in order to render the sputum negative and to insure a safe future for the patient. Contrary to what might be expected, bronchial disease in this series had little or no effect on complications.

Bronchiectasis has been found to exist in many chronically infected lungs. When its presence is suspected, bronchograms (with the injection of iodized oil) should be utilized. To relieve the patient of cough and expectoration, those areas of disease must be excised, even though the sputum may be negative for tubercle bacilli.

While tests for sensitivity of the tubercle bacilli to streptomycin were done on a number of patients, no attempt has been made in the study to correlate these findings with the end results and complications.

The complications are due to operative trauma on air passages, blood vessels and pulmonary parenchyma. Apparently, lung tissue can be incised and sutured, readily and with few complications, when it is done in the periphery of the lung—away from large bronchi and vessels.

No complications in the series were related to operative interference with the great vessels. The single operative death was due to a transfusion reaction.

In some patients there were multiple factors making operation necessary, and in some cases multiple sections of lung tissue were done at the same procedure. For example, a patient might have an upper lobectomy for a destroyed lobe and a segmental resection of a cavity in the apical segment of the lower lobe done at the same operation.

Complications were most frequent in patients under 20 years of age and over 60 years of age.

The extent of the disease was not a factor in complications.

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A positive sputum within 30 days prior to operation was a factor in the complication group. With the present method of preparation of these patients, practically no patient has a positive sputum within one month of operation.

Progression of disease was a definite factor in patients who developed complications.

Bronchial disease, *per se*, has no effect on complications.

The size of the cavity has no effect on complications.

In patients who showed new disease after operation, the majority developed it in pre-existing areas of disease. This, therefore, was an exacerbation and not a true spread.

Non-tuberculous complications such as diabetes, pregnancy and peptic ulcer had no effect on pulmonary complications. One patient with silicosis did develop a bronchopleural fistula which closed.

The resection of diseased lung tissue offers a safe and successful method of controlling the disease in a patient who has been freed of the acute exudative phase by means of streptomycin and PAS.

Resection of tuberculous lesions can be done with negligble risk and with the prospect of a future reasonably safe from exacerbation. There were three deaths in the pneumonectomy group and one in the lobectomy group. There were no deaths in the wedge and segmental group. This suggests that tuberculosis should be treated early and vigorously. Suitable lesions which persist should be excised.

SUMMARY

A review of 106 cases who underwent various forms and degrees of pulmonary resection is presented.

It is recognized that the follow-up period (2 years at the longest) is insufficient to determine the eventual fate of this group of patients. At present, the results are encouraging.

This report should not be interpreted to mean that we believe that all patients should have some type of resection. Some other types of surgery have a definite place in the treatment of pulmonary tuberculosis, but that discussion is not within the scope of this study.

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SAMA June Convention Program Set.

Panel discussion devoted to doctor draft, general practice and SAMA chapter activities will highlight the third annual convention of the Student American Medical Association. More than 1,000 registrants are expected to attend the meeting June 15, 16 and 17 at the Edgewater Beach Hotel, Chicago.

The tentative program announced by President David Buchanan, University of Illinois senior, calls for official business of the House of Delegates on Monday, June 15. That night Abbott Laboratories will be hosts at an informal get-together. Tuesday's program will feature the above panel discussions in the morning and tours of AMA Headquarters in the afternoon. Election of officers and a premiere of an outstanding medical film are on the docket for the last day of the meeting. A large technical exhibit will make its initial appearance at a SAMA convention this year. All AMA members are cordially invited to attend the sessions.

XUM

DIVERTICULOSIS OF THE JEJUNUM— A Frequently Overlooked Source of Gastrointestinal Bleeding

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The difficulty sometimes encountered at operation in determining the source of gastro-intestinal hemorrhage warrants a report of a frequently overlooked cause of bleeding from the bowel.

The fact that diverticula occur in the esophagus, stomach, duodenum and colon is well known. When, however, diverticula of the small intestine are considered, one is inclined to think of this condition as being largely confined to Meckel's diverticulum of the ileum. This is erroneous, for many instances of diverticulosis of the jejunum have been reported since Sir Ashley Cooper first described this condition in 1844.[1]

These abnormalties differ from the more widely known Meckel's diverticulum in several respects. Aside from the obvious proximal location in the upper small bowel, these pouches are multiple and usually develop after the age of 40. Meckel's diverticula are single, congenital and located on the antimesenteric border of the ileum, whereas those arising in the jejunum are situated in or near the mesenteric border. These latter diverticula dissect downward between the leaves of the mesentery where they are relatively inconspicuous until they reach considerable size. This peculiarity of behavior, plus a tendency of the saccules to retract to the level of the adjacent bowel when the intestine is empty no doubt explains the frequency with which these pouches may be overlooked.

The reported incidence of this condition must be misleading. While Kozall, McMahon and Kiely[2] found only slightly more than 300 cases of jejunal diverticula in the literature in 1950, C. W. Mayo[3] reported 124 at the Mayo Clinic during the past 42 years. King[4] found 32 jejunal diverticula in 5000 autopsies and 5 at operation. On the other hand Case[5] found only 5 cases in 6847 gastro-intestinal X-rays.

Diverticula situated in the jejunum are probably less prone to cause symptoms than those in the ileum or colon due to the more liquid intestinal contents and lower bacterial counts. Complications, however, do occur. Traumatic rupture of the sac, diverticulitis with perforation and obstruction of the bowel due to the formation of enteroliths within the pouches have been reported. Fortunately all of these complications direct the surgeon's attention to the underlying cause and the correct diagnosis is usually made at operation.

A fourth complication, hemorrhage, is more difficult to trace back to the guilty diverticulum for at operation the involved saccule may not be distended and hence may be overlooked during the examination of this segment of bowel. Undoubtedly this explains a goodly number of massive gastro-intestinal hemorrhages for which no adequate cause can be found at subsequent operation.

Kozall, *et al.*,[2] reported a case of multiple jejunal diverticula associated with such severe hemorrhage that 17 500 cc. of blood was required to stabilize the patient and permit operation. Their review of the literature disclosed only six instances of bleeding from this source. These figures are undoubtedly misleading, for the occurrence of hemorrhage must be higher. At least two instances of this complication have occurred in Richmond during the past few years.

The cause of bleeding from these saccules is not explained as readily as in the case of Meckel's diverticula where gastric mucosa often is present with secondary ulceration and hemorrhage. A possible explanation is found in the mode of origin of these acquired diverticula. They occur usually along the mesenteric border where the intestinal wall is weakened by perforating blood vessels. This means that each sac is associated closely with a branch of a mesenteric vessel. The thinned out wall of the diverticula which usually consists of only mucous membrane and connective tissue makes the underlying vessel more liable to local trauma with submucosal bleeding, ulceration and ultimate hemorrhage. In Kozall's[2] case massive bleeding followed a fall which was of sufficient severity to fracture a humerus and he felt that this trauma may have precipitated the hemorrhage. Be this as it may, bleeding does occur and this source of blood loss must be ruled out during an exploratory laparotomy for gastro-intestinal hemorrhage.

*Read before the annual meeting of The Medical Society of Virginia at Richmond, September 28-October 1, 1952.

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Mayo[3] feels that in order to avoid overlooking collapsed diverticula steps should be taken to distend these sacs at the time of operation. This can be accomplished by one of several maneuvers. The jejunal contents may be milked downward while the bowel is compressed at a lower level. The upper jejenum may be inflated by air injected through a Miller-Abbott tube or through a hypodermic needle inserted through the bowel wall and attached to an air-filled syringe. These simple measures undoubtedly would demonstrate many diverticula which otherwise could escape detection.

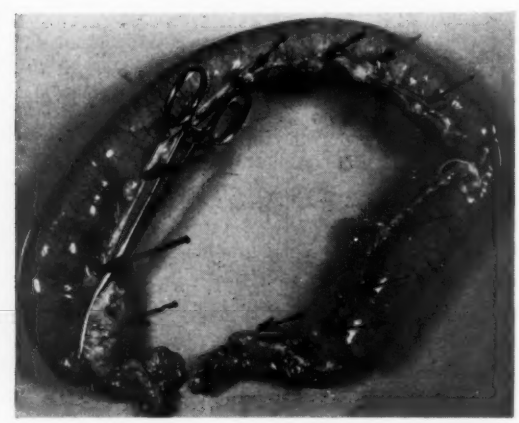
The treatment of this condition is resection of the involved segment of jejunum. This may entail removal of considerable bowel for cases have been reported in which several hundred pouches have been scattered throughout the upper jejunum.

The following illustrative case will be briefly reported:

B.A.J., a 61 year old woman, was admitted to the Retreat for the Sick on May 9, 1952, because of an attack of vomiting the preceding day which was followed shortly afterward by the passage of dark blood by rectum.

Her past history dealt chiefly with a 35 year story of rheumatoid arthritis which had confined her to bed for the past few years. She had three children and her health other than the above had been generally good.

Further questioning developed that while no blood was vomited several large bright to dark bloody stools had been passed prior to admission to the hospital. The severity of this bleeding was borne out by the initial blood examination which showed a hemoglobin of 44% and 2,500,000 red blood cells.



Segment of jejunum resected. The diverticula are demonstrated by distending the loop of bowel with water. The Kelly clamp occludes the largest diverticulum which was the only sac evident when the bowel was first examined at operation.

Physical examination showed only the marked flexion deformities of a severe arthritis. The abdominal, pelvic and rectal examinations were essentially negative. Old blood was present in the first stool following admission but subsequent bowel movements contained none.

The patient's condition improved and after a 500 cc. blood transfusion, X-ray studies were made of the gastro-intestinal tract. Barium by mouth showed a normal stomach and intestine. Repeated barium enemas, however, revealed a constant area of narrowing in the upper sigmoid which persisted despite antispasmodics. In view of the history and these findings an exploratory laparotomy was carried out on May 20.

The sigmoid showed nothing abnormal. No cause was found for the narrowing noted on X-ray. The remainder of the gastro-intestinal tract was examined. About 30 cm. below the ligament of Treitz, a diverticulum measuring about 4 cm. in diameter was found extending into the mesentery. No other pouches were seen immediately and under the impression that this was an isolated diverticulum steps were taken to excise it. The application of a rubber clamp to facilitate this resulted in the proximal jejunum becoming somewhat distended with air and a number of diverticula then appeared between the leaves of the mesentery. The bowel was milked downward after the method of Mayo and this further delimited the diverticula-bearing area. This segment of bowel, which measured about 65 cm. in length, was resected and an end-to-end anastomosis was done. A 500 cc. blood transfusion was given and the patient was returned to her room in good condition. The convalescence was uneventful and she was discharged on the tenth post-operative day. She has had no further bleeding since her return home.

Examination of the specimen showed extensive diverticulosis and a small (1 x 1 cm.) benign polyp which had not been palpated through the wall of the bowel. A thrombosed vessel was found in the polyp, the significance of which could not be determined.

CONCLUSIONS

1. Diverticulosis of the jejunum is not as uncom-

mon as the published cases would indicate.

2. The complications resulting from diverticula elsewhere in the intestinal tract also occur in those situated in the jejunum.

3. Massive hemorrhage may result from jejunal diverticula and unless operation is carried out during the active period of bleeding the involved saccule may be collapsed and escape detection.

4. Whenever the gastro-intestinal tract is explored for obscure bleeding steps should be taken to distend the jejunum in order that any diverticula present may be demonstrated. Several means of accomplishing this have been suggested by Mayo.

5. X-ray examinations of the gastro-intestinal tract are seldom helpful in jejunal diverticulosis.

6. Resection of the involved segment of bowel is the indicated treatment for this condition.

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312 Medical Arts Building.

Floral Eponym

Simsia (family Compositae)
Sims, John (1749-1831)

Simsia as a floral eponym has had its ups and downs. Two genera have been named for Dr. John Sims, but neither can be found in current horticultural dictionaries or encyclopedias. I am indebted to S. F. Blake, Senior Botanist, of the Department of Agriculture for the following: "The first Simsia was published by C. H. Person in 1807 for a genus of Compositae with three Mexican species, not remotely related to Helianthus. It was kept up for a good many years but finally reduced to Encelia by Bentham in 1873. In 1913, I (S. F. Blake) reviewed the genus in my master's thesis and since then it has been pretty generally recognized as distinct. The second Simsia was dedicated by Robert Brown in 1810. It was a genus of Proteaceae from Australia and was renamed Stirlingia by Endlicher in 1838, which name is now used."

Dr. John Sims, a native of Canterbury, was a prominent London botanist and physician. He was a member of the Royal Society and an original member of the Linnean Society. For a number of years he edited Curtis' Botanical Magazine. Sims graduated in medicine at Edinburgh in 1774 and was a Licentiate of the Royal College of Physicians and was physician to the Surry Dispensary. He was consultant at the disastrous confinement of Princess Charlotte but did not see the patient until she was on the point of death, being kept in reserve in an anteroom.

XUM

THE USE OF REHABILITATION MEDICINE IN THE COMPLETE TREATMENT OF HEMIPLEGIA*

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We are constantly being reminded of the medical problems associated with our aging population and chronic physical disabilities, but, like the gradual growth of our children, it takes an eighteen year old draft law or the need for a college education to make us realize that our offsprings are no longer little ones but have grown up. Any survey relative to population percentage reveals the solid fact that the medical problems associated with chronic physical disabilities and the aging population are no longer little problems—they are grown up, they are of major proportions, they are here, and to a large extent they are our babies because they are the offsprings from the excellency of the job done by the medical profession.

On the basis of the 1950 census, it is estimated that there are about twelve and one-half million persons 65 years of age and over in our population at this time. This is a 36% increase in this age category over 1940, and twice the general population increase. Therefore, it is readily understandable that more and more of the physician's practice has to do with physical disability resulting from acute or chronic disease associated with an aging population. Of this category, hemiplegia following apoplexy is of major proportions. On the basis of early statistics, it is estimated that there are over a million hemiplegic patients in the United States. Although hemiplegia is a major medical problem and is on the increase, with our fuller understanding of this condition we need not view it with a feeling of hopelessness. In our experience, a large percentage of these patients can be rehabilitated to self-care and interesting avocations and a lesser percentage can be rehabilitated to productive, useful vocations. Furthermore, unless we are dealing with a rapidly progressive underlying disease, the activities associated with rehabilitation procedures bring about a better mental attitude and, in those cases associated with hypertension, usually a lowering and stabilization of blood pressure level.

The treatment of hemiplegia following apoplexy is separated into two parts. The first or immediate treatment is devoted to saving the life of the patient and arresting the pathologic process in so far as possible. The second part of the treatment is concerned with the residual loss of function (chiefly varying degrees of hemiplegia) resulting from the damage to the brain caused by the vascular accident or other pathology.

The purpose of this presentation is to discuss the second part of the treatment, that is, the use of rehabilitation medicine in the complete treatment of hemiplegia. Much can be done for a patient with hemiplegia and the likelihood of his remaining a "hopeless cripple" can be greatly reduced by proper management. Since there is still some misconception regarding the treatment of this condition as indicated by patients who have been immobilized for weeks or months, it seems worthwhile to discuss a more rational approach to the problem and to show the results that can be obtained by early and energetic treatment.

There are two fundamental principles of medical management that underlie all activities relative to restoration of physical function:

First, nothing prevents contractures like proper positioning and proper movement of the part.

Second, nothing begets movement like movement itself; nothing begets power of movement like movement against resistance and nothing begets coordination like repetition of movement in normal range of function.

Prevention of Contractures: This is accomplished by (a) proper positioning in bed and (b) movement of the affected joints through their normal range of

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motion at least four times a day. All hemiplegic patients, while in bed, whether they be in shock or not, should be properly positioned with a view towards preventing contractures. This consists of the use of a footboard or a posterior leg splint to prevent foot drop, the use of a sandbag or hard pillow to prevent outward rotation of the affected leg and the use of a pillow in the axilla to prevent adduction of the arm. These procedures are the very essence of simplicity but are so frequently overlooked in the proper management of not only hemiplegia but other neurological conditions as well, such as polio, Guillain-Barre, peripheral nerve injuries and the like. Positioning in bed is of vital importance to the ultimate outcome of treatment. Once a contracture has become established, it requires more time to overcome the contracture then it would to treat the original conditions. In addition to proper positioning, the affected part (leg and arm) must be passively carried through its full range of motion at least four times a day. The most frequent complication is the so-called "frozen shoulder" with all the pain and limitation of motion that goes with this diagnosis. This condition results from spasticity of muscles around the shoulder of the affected upper extremity. There is seldom calcium deposits but the joint space is narrowed. Therefore, it is most urgent that the affected arm be passively carried through its full range of motion, stressing the overhead position, several times a day if we are to prevent this condition.

As soon as the patient recovers from shock, we instruct him to tense the quadriceps muscle in the affected leg. It is rare that this muscle is completely knocked out. There will usually be a flicker of response even in a leg that is apparently totally flaccid. Quadriceps setting should be performed each hour while awake, starting with a few contractures of mild intensity increasing the amount and power—always within fatigue limits—until other rehabilitation procedures have taken over this function. In addition to the above, as soon as the patient recovers from shock, we use some type of bed frame with a hanging trapeze bar or a simple U strap to enable him to use his good arm to assist himself in moving about in the bed. We have found that the U strap or rope is quite simple to construct and extremely efficient. The U rope is constructed by tying both ends of a rope to the foot of the bed, making the U long enough for the patient to grasp with his good hand and pull himself up into a sitting position. We recommend that the patient pull himself up at least once an hour while awake but we find that most of our patients will pull themselves up more often to change positions. We recommend that if a patient is to be restricted to bed for more than ten days or two weeks that some type of bed frame be used and that pulley therapy be instituted for both the arms and the legs. However, the majority of patients do not remain in bed long enough to justify a frame. Usually the U strap will be quite sufficient.

Sitting Up in Bed to Re-Establish Balance: If there are no complications, the second or third day after regaining consciousness, the patient should be propped up in bed and by the end of a week should be sitting on the side of the bed or in a chair at least twenty minutes twice a day. If there are no signs of fatigue this time can be increased.

You will note that to this point all discussion of management of hemiplegia has presupposed the patient to be restricted to bed or, at most, sitting in a chair beside the bed. If the patient has fully recovered from shock and is able to sit on the side of the bed without severe disturbance of balance, a decision now has to be made as to whether the course of rehabilitation shall be active or restricted. Most medical literature on this subject emphasizes that active rehabilitation for cases resulting from thrombosis or embolus can be done as soon as the patient regains consciousness but that cases resulting from hemorrhage and other conditions should be restricted to bed or mild activity for at least two weeks. Although we can agree with the theory behind these recommendations, in actual clinical practice it has been our experience that we gain but little by attempting to push the patient for the first week. As percentage would indicate, we have had but very few cases which resulted from cerebral hemorrhage. In these cases, it has been our experience that the patients are much sicker than patients from cerebral thrombosis. They normally have more headaches and they do not desire to be active. In these cases we proceed slower. However, we have never felt that we had to stick to a strict two weeks in bed regime. Clinically, if the patient has improved sufficiently for activity, we will start ambulation during the second week.

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Ambulation: Cases of hemiplegia that recovered rapidly with but mild residual present no great problem relative to ambulation provided they have been properly positioned in bed and are gotten up early. These patients will start walking with the aid of a nurse or a member of the family as early as the third or fourth day. They will rapidly recover balance and ambulate by using a cane and, in some cases, without any aid. If there is moderate involvement of the lower extremity, one sees that very chracteristic "hemiplegic gait"—the patient walks with a fixed knee joint and circumducts the total affected lower extremity. This gait is protective in nature, and is to overcome the dorsiflexion and supination of the foot that follows the flexion of the knee and the flexion of the hip (Strumpell's sign), the characteristics of this disability. The patient fears placing weight on the foot—he may stumble, he may injure the ankle. It is important to provide a brace early to overcome the pattern of circumductive walking and to restore the patient's confidence in ambulation.

About half of our hemiplegic patients will require some type of short leg brace. A simple wire drop foot brace is sufficient for a number of patients but when the ankle is unstable, a double bar ninety degree stop leg brace is required. In the most severe cases (about 4%) a long leg brace for stability of the knee as well as the ankle is required.

In summarizing, we would like to re-emphasize that second to saving the patient's life and arresting the underlying disease process, proper positioning in bed and movement of the affected parts is of major importance. These procedures are the very essence of simplicity but so often overlooked. Patients should be gotten up early and started on ambulation with or without a short leg brace as indicated. Most of your cases will come under the classification of mild to moderate disabilities and can be handled at home.

The length of this paper precludes giving any details of exercise procedures. However, a monograph has been prepared by Dr. Howard Rusk and the staff of the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center. This monograph can be obtained from Dr. Rusk or from the Professional Services Department, Sharp and Dohme, West Point, Pennsylvania. You will find this pamphlet excellently done and covering the exercises for the mild or moderate cases. Severe cases will require more facilities than are found in the average home and will, in addition, rquire skilled therapists for best results.

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XUM

TREATMENT OF BURNS*

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In 1946 I presented before The Medical Society of Virginia a paper on the treatment of burns. The early local treatment consisted of Modified M. C. V. Ointment applied without debridement and under strict aseptic conditions; infrequent dressings; early skin grafting, etc. The general treatment consisted of giving plasma and blood supplemented with electrolytes to prevent or combat shock; oral administration of electrolyte-alkaline solution unless contraindicated; sufficient fluids to obtain a urinary output of about 1000 cc. daily; a high carbohydrate-high protein diet (200 gm. or more daily) with adequate vitamins, particularly the vitamin B complex and vitamin C.

This discussion will be concerned mainly with the results obtained by the method employed at that time, which is still in use except for minor changes, and with such advancements and improvements in the management of burns as have been reported by others.

The mortality rate from burns is still far too high, even in our better hospitals, and it is important that a discussion of their management should be presented to the profession more often.

Although the management of burns remains one of the most controversial subjects in the entire field of surgery, the greater part of the controversy resolves itself around the local treatment. Nevertheless, there is still considerable disagreement with regard to certain phases of the general treatment, paricularly the question of how much blood to give in the early or shock phase. There is also considerable discussion of the value of ACTH and Cortisone in the treatment of burns, but the majority of opinions at present indicates that both are of doubtful value.

World War II was an important factor in stimulating further investigation and research in the management of burns, and considerable progress has been made during the past fifteen years, but the greatest improvement has been in the general treatment. It is regrettable that most of the information obtained is not common knowledge in the profession as a whole but is confined chiefly to those who are making a special study of burns.

Severe burns are surgical emergencies, and both the early general treatment and the early local treatment should be carried out promptly and simultaneously. To obtain the best results it is advisable to have a team trained in the management of burns. Certain members of the team should immediately start the early general treatment, giving blood, plasma, electrolytes, etc., to prevent or combat shock as indicated. At the same time other members of the team should be carrying out the local treatment.

The term "severe burns" as here used means all blistering or deep burns that involve a considerable part of the body surface. There are many factors that may profoundly influence the seriousness of the condition, namely: The extent and the depth of the burn; the age of the patient; the time elapsing between the burn and the institution of proper treatment; the general condition of the patient; the location of the burn, and the causes of the burn. Usually any patient with as much as 8 to 10 per cent of the body surface involved in a third-degree burn or any patient with 15 to 20 per cent of the body surface involved in a deep second-degree burn presents a rather serious surgical problem. This applies particularly if the patient is very young, very old, debilitated, or if the burns involve the extremities.

Every physician who is called upon to treat burns should be able to determine the extent of the body surface burned, but on the first examination it is often impossible for even those with considerable experience in the management of burns to determine their depth. The exact depth of the burn frequently cannot be determined before the tenth to the fourteenth day, and at times the depth of the entire burned area can not be determined that early. Some surgeons at this time perform biopsy of the deeper burns to determine their depths; if hair follicles and sebaceous glands are present it is evident that epithelization

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will take place. There is a tendency for the physician with little experience in the treatment of burns to over-estimate the extent and depth of the burned area. Even physicians with extensive experience in the treatment of burns frequently over-estimate depth. Lund and Browder's modification of Berkow's method for determining the extent of the body surface burned in adults is recommended:

Head	7%
Neck	2%
	9%
Anterior Trunk	13%
Posterior Trunk	13%
Buttocks	5%
Genitalia	1%
	32%
Upper Arms	8%
Forearms	6%
Hands	5%
	19%
Thighs	19%
Legs	14%
Feet	7%
	40%

NOTE: The palm represents slightly less than 1 per cent of the body surface.

TREATMENT

The therapy of burns is divided into local treatment and general treatment.

The *local treatment* of burns is classified as follows: (1) agents and dressings applied to the burned areas, or the open treatment; (2) early plastic treatment, and (3) late plastic treatment.

The general treatment of burns is divided into three stages: (1) early general treatment, during shock or the potential shock period; (2) intermediate general treatment, and (3) late general treatment.

Local Treatment. Whether debridement is to be carried out or not will depend to a great extent on the local treatment to be applied and on the general condition of the patient. When Modified M. C. V. Ointment and compression dressings are used locally, the need for debridement is practically eliminated. On the other hand, if petroleum gauze and compression dressings are used locally and if the patient's general condition justifies it, debridement with morphine analgesia may be indicated, but no anesthetic should be given. When petroleum gauze is used, the gauze should be extremely fine-meshed, and only one layer should be used; otherwise, there will be considerable maceration of the tissues.

Most surgeons of experience in the treatment of burns will now agree that extensive debridement of severe burns not only is unnecessary but may be extremely dangerous. Extensive debridement may be an important factor in producing shock, or increasing it if it is already present. The belief that extensive debridement is necessary for early burns in order to prevent severe infections has been proved incorrect if the local method to be described has been employed early. However, with neglected second-degree burns and extensive third-degree burns infection may be a very real problem. If one were treating only the local wound, debridement with the patient under anesthesia would be the proper surgical procedure in certain cases. If the burn is severe, one is dealing with a critically ill patient, and anything that would be an important factor in producing shock or delay unnecessarily the correction of the abnormal physiologic condition would many times offset any benefits that might result from debridement. The practice of giving these critically ill patients an anesthetic is to be condemned.

Ordinarily we do not use soap and water for cleansing these wounds, but if there is so much dirt, etc., that a soap appears indicated, one containing hexachlorophene should be used. If the general condition of the patient appears satisfactory, we do excise devitalized tissue that is partly detached, and gently remove loose dirt with cotton balls soaked in saline solution. We never open blebs at the time of the original dressing. A patient with severe burns, if there is delay in carrying out the local treatment, may go into shock, and the longer the delay the greater the possibility of infection. *If there is delay in carrying out the early general treatment shock may rapidly ensue, or if already present it may progress until irreversible changes take place.*

Whenever possible, burns should be dressed in a special room used for that purpose, with an exhaust fan to help free the air from contamination; or ultraviolet light may be used instead. Certainly the patient should not be dressed in large wards or in rooms with other patients. If sloughs of any par-

ticular extent are to be removed, the patient should be dressed in the operating room. The surgeons and nurses engaged in carrying out these treatments should wear caps, masks, sterile gloves and gowns, and they should observe a sterile technic throughout the procedures. Proper masking of the patient and those engaged in carrying out the local treatment is most important. If these principles are not observed, infections will be increased.

Application of Modified M. C. V. Ointment with adequate occlusive pressure dressing is an excellent method of local treatment. M. C. V. Ointment is so soft that it does not adhere well to the deeper burns in warm weather; therefore, it has been modified simply to make it of greater consistency with the therapeutic value remaining essentially the same. Modified M. C. V. Ointment is as follows:

Sulfanilamide (finely powdered)	6.0%
Peanut Oil	8.0%
Cold Cream (Eli Lilly & Co., #25)	42.5%
Lanolin	42.5%
White Wax	1.0%

With an aseptic technic, the local treatment is applied as follows: 1. Modified M. C. V. Ointment is thickly applied to the entire burned area and to 1 inch (2.5 cm.) or more of the adjacent unburned skin. 2. A layer of Kerlix gauze (Curity) is then applied. 3. One or two layers of large thick combines are applied. (Johnson & Johnson manufacture large thick pads consisting of fine gauze, cotton, cellulose and waterproofing material on the outer side which have recently been put on general sale. These particular pads are better than the large combines but they should manufacture even larger sizes.) 4. A wide elastic bandage is applied. Stockinet of single thickness may be used instead of the Ace bandage; it is excellent for holding these dressings in place.

When the patient is uncooperative, there is often difficulty in keeping the dressing on the body, in which event we sometimes use a many-tailed binder. In addition, we place stockinet over the entire dressing. This has been most helpful in keeping the dressings in place.

To obtain adequate compression without constriction or tourniquet effect, it is necessary to have a thick and "fluffy" dressing. Constriction or a tourniquet effect must be avoided. As has been pointed out by many surgeons, when one is bandaging an extremity the pressure must be greater distally.

Frequent dressings should be avoided. They may delay healing, and they increase the possibility of infection. Infections of second-degree burns may result in complete loss of the skin.

This type of dressing with Modified M. C. V. Ointment has a quick analgesic effect. Burned patients treated by this method remain unusually comfortable, and the need for sedatives and hypnotics is very much reduced. There is slow absorption of the sulfanilamide from the ointment, and the blood concentraion, even in extensive deep burns, remains low; therefore, it is not necessary to determine sulfanilamide blood levels. On the other hand, sulfonamides should not be given by other routes. It is often surprising how much healing will have taken place at the time of the first change of dressing, whereas, with many other methods of local treatment, it is not uncommon to find areas that originally were of second degree showing total skin loss. As is well known, the deeper the burn the greater the possibility of infection.

It is not advisable to use this ointment longer than two or at most three weeks. If preparation of the deep burns for grafting cannot be started at the end of that time, some other method of local treatment without sulfonamides should be substituted. For badly infected late burns we do not necessarily advocate this local method of treatment; in fact, we know of no method that is entirely satisfactory in these cases. However, we have used this method in a number of cases of moderate infection, and the results have been much better than was anticipated; but those cases should be individualized. Furacin has been reported as satisfactory in the treatment of infected burns. In such burns we often apply a wet dressing; in some cases we use saline dressings, and others we frequently use 0.5 per cent acetic acid, but of course there are other solutions which may be used to advantage. We use penicillin for all infected burns; in addition, we use aureomycin, dihydrostreptomycin or terramycin, depending upon the sensitivity of the organisms present.

Many surgeons are convinced that petroleum gauze with compression dressings and sulfonamides given orally or intravenously will accomplish the same results as the method just described, because the sul-

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fonamide concentration in the fluid within the burn bleb is about the same as in the blood. There are three reasons why Modified M. C. V. Ointment with compression dressings will give better results. First —an important fact—the ointment places the sulfanilamide in direct contact with the devitalized tissues that cannot be reached by the circulating blood. This, in my opinion, accounts for the low incidence of infection with this method of local treatment. Second, the dressings can be removed without producing bleeding of any consequence, as this ointment leaves a thin film adherent to the burned area. It is difficult to remove petroleum gauze from a deep burn without producing bleeding and damage to the burned area. Third, the patient is more comfortable. To use Modified M. C. V. Ointment with compression dressings is to be impressed with its efficacy.

During the past few years some surgeons have been omitting ointments, etc., from the burned area and applying dry gauze with compression dressings for ten to fourteen days. If at the end of this period the burned area is not ready for grafting, they apply aureomycin ointment. This method deserves further trial.

There are numerous other methods of local treatment, some of which have merit. One of the best informed surgeons uses 5 per cent scarlet red ointment locally. Some surgeons are using various antibiotics locally; aureomycin and penicillin are perhaps the most popular. A few are using Zinax. Many well informed surgeons do not believe that any method of local treatment stimulates healing of the burned area. There are some agents used locally in the treatment of burns that actually delay healing.

Kyle and Wallace, as well as Pulaski and Blocker, are advocates of the open treatment of burns. Evans and his associates at the Medical College of Virginia are also using this open method of treatment in selected cases. This is a method with which all general practitioners and general surgeons should be familiar. In cases of extreme disaster it may be the only feasible method, but there are certain disadvantages:

1. It is not applicable when the entire circumference of the body is burned.
2. An extremity requiring treatment must be suspended.
3. A certain amount of restraint has to be placed upon the patients (particularly the younger ones), because if much motion takes place, cracks will occur in the burned surface and infection will follow.
4. Considerable nursing care is required.

Aureomycin powder is used locally in the open treatment by Evans and his associates.

The advocates of the open method of treatment claim three advantages: (1) A dry wound, which is unfavorable to bacterial growth; (2) the bactericidal effect of light, and (3) the fact that the wound remains cool, which is unfavorable to bacterial growth.

The advocates of the open method particularly recommend it for the treatment of burns of the face, the genitalia, the buttocks, one surface of the body and the extremities.

It will be some time before it is definitely determined whether the open method of treatment is as satisfactory as the methods that have been in use for a number of years. There is a great tendency for American physicians to give up methods that have been fairly satisfactory in order to try something new. There is some justification for this in the treatment of burns, as there is no ideal method of treatment at present. Neverthless, although one must keep an open mind with regard to all new ideas, greater evidence must be accumulated as to the results obtained from the open method before it is accepted as a substitute for well-tried methods. Although it may eventually prove as satisfactory as its advocates now claim, it is well to remember that the open method of treatment fell into disrepute many years ago.

I have now had extensive experience with Modified M. C. V. Ointment and compression dressings as the local treatment for burns. I am still deeply impressed with this method of local treatment; in my opinion, it is equal to any local method in use today. I have observed only 2 cases of sensitivity to Modified M. C. V. Ointment; neither of the patients had received adequate fluids, and one was badly dehydrated. In a very small percentage of cases, healing has appeared somewhat delayed, which is difficult to explain, but this has been observed even more frequently with all other methods of local treatment that have been used. REGARDLESS OF THE LOCAL METHOD

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OF TREATMENT EMPLOYED, IT SHOULD BE STRESSED THAT THE PATIENT MUST BE MAINTAINED IN A STATE OF GOOD NUTRITION; OTHERWISE, HEALING WILL BE DELAYED.

Early Plastic Treatment: Deep burns should be grafted as soon as the burned area can be brought into a healthy condition. Grafting ordinarily should be started by the 10th to the 14th day or earlier whenever possible. Occasionally it may be necessary to defer grafting slightly longer because of the condition of the burn and the general condition of the patient, but one should keep in mind that the most satisfactory dressing for a deep burn is a split-thickness skin graft. There are four principal ways of removing sloughs:

1. Saline dressings. When the slough is very thin, apply saline dressings daily.
2. Digestive enzymes (to be used when sloughs are thin).
3. Phosphoric acid. Apply phosphoric acid (0.9 per cent) to the sloughs of thin to moderate thickness (pyruvic acid may be used instead of phosphoric acid). These sloughs should be incised for better penetration.
4. Surgical excision. *This is the preferred method for removing sloughs,* particularly the thicker ones. If the grafting is not done on the day of the excision, apply dry gauze dressing with compression.

Personally, I prefer dermatome split-thickness (thin) grafts of about 0.010 inch. The thin grafts take more readily than do the thicker ones. Under the most favorable conditions, about 90 to 95 per cent of thin split-thickness grafts should take. If the grafts are cut thin enough, the same donor site can be used again. Pinch grafts are occasionally indicated for deep, small burns, but ordinarily we prefer not to use them, using split-thickness grafts instead. When there is difficulty of obtaining sufficient large autografts, they should be cut about the size of postage stamps and separated about ¼ to ½ inch (0.6 to 1.2 cm.). For extensive deep burns when sufficient split-thickness postage stamp size autografts cannot be obtained, isografts (hemografts) should be used. When isografts (homografts) are used they should be placed between the autografts.

Anemia should not be allowed to occur if the patient is seen early. If anemia has occurred it must be corrected before grafting. If there has been a respiratory burn, grafting must be delayed, and sodium pentothal supplemented with cyclopropane is perhaps the best combination of anesthetics if a spinal anesthetic cannot be used. The most important principle is to get the granulating surface covered, creating a closed wound, the beneficial effects of which are known, and thereby avoiding deep scars and contractures. Early and proper splinting of joints is of decided importance in preventing contractures. The hand should be placed in the position of function when it is to be bandaged for several days or more. In treating burns one should consider the function of all joints in the burned area. Some surgeons apply a layer of cellophane to the dermatome drum before cutting the graft, which keeps the graft from contracting. Very few stitches are required to hold these grafts in place.

The patient should not be exposed to sudden changes of temperature, and during grafting it is important that only minimal exposures be made, as there is a strong tendency to shock. The blood lost during the operation must be promptly replaced. *A completely sterile wound is not necessary for grafting, but, of course, the healthier the wound the better. When extensive grafting is necessary, the grafting should be performed on the flexor surfaces first.*

Late Plastic Treatment: The late plastic treatment of burns is concerned with the correction of contractures, cutaneous defects and deformities, or perhaps with the removal of thin grafts that were applied simply to cover a granulating surface. Therefore, the grafts used must be considerably thicker than those described for early plastic treatment. Not only should these grafts be thick enough to protect the underlying structures, but they should serve the functions of essentially normal skin. Ordinarily, I prefer split-thickness grafts of about 0.020 inch. Occasionally I use pinch grafts to cover small areas, but they have a limited field of usefulness. In the case of certain contractures and scars, the Z plastic and releasing incisions are extremely useful procedures. In some instances a pedicle graft will be necessary to obtain satisfactory results. After oozing from the donor sites has been controlled, the sites should be dressed in the same way as a burned area, with Modified M. C. V. Ointment and occlusive pressure dressings. It is essential to keep the patient in a

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good nutritional state during all phases of plastic surgical treatment; otherwise, failures are likely to result. Cold cream, or lanolin and cold cream should be applied to the burned area as soon as all the areas are healed, to prevent drying, cracking and irritation of the skin.

General Treatment.—Early General Treatment: There must be no delay in carrying out the early general treatment. When the patient is first seen he complains of pain and thirst and is often shaking as though he had a chill. The more severely burned patients are given morphia on admission. In case of shock the morphia, if indicated, should be given intravenously and in reduced dosage. It is practically never necessary to give morphia to any burned patient, regardless of the extent and degree of the burn, after applying Modified M. C. V. Ointment.

When laboratory facilities and personnel are adequate, blood should be collected immediately for determination of blood volume, the hematocrit reading, the hemoglobin level, the erythrocyte count, the values for plasma proteins and blood chlorides and the carbon dioxide combining power of the blood. These laboratory procedures and urinalysis should be repeated one or more times daily during the first forty-eight to seventy-two hours in order to carry out the fluid therapy in a satisfactory manner. The Rh factor should be determined before repeated transfusions of blood are given. Other indicated laboratory procedures are determination of the nonprotein nitrogen level, the blood potassium level, the prothrombin level and the icterus index.

This method of local treatment can be carried out with minimal laboratory procedures. When laboratory facilities and personnel are limited, as they frequently are, particularly in the smaller hospitals, the hematocrit reading, the value for hemoglobin, the erythrocyte count, the levels of blood chlorides and plasma proteins and the output of urine, together with the clinical condition of the patient, can serve as a good guide to fluid therapy.

Shock: Burned patients are carefully observed for signs and symptoms of impending shock before the blood pressure begins to fall. The blood pressure and pulse are recorded every half hour for the first twenty-four hours or until the danger of shock has passed.

Primary shock occurs from vasomotor reaction, and is caused by pain, fright, injury, etc. It develops promptly, while *true shock or secondary shock* usually develops slowly. In the presence of severe burns primary shock may merge into secondary shock. There is little capillary permeability in cases of primary shock, as it does not produce hemoconcentration. This local treatment with Modified M. C. V. Ointment and compression dressings almost immediately relieves the pains and chilly sensations; therefore, the local treatment is an important factor in preventing shock or in helping to relieve it if it is already present.

Secondary shock seldom occurs under two or three hours except with the more severe burns. In the early stages of such burns there is often no fall of arterial blood pressure. Even before there is any fall of blood pressure or evidence of beginning circulatory failure, the incipient stage of true shock may be detected by slight hemoconcentration and a diminished output of urine. *The presence of hemoconcentration in the early stages will serve to differentiate true shock from either hemorrhage (with hemodilution) or primary shock. Whenever possible, the best treatment of shock is prevention.*

Falling plasma protein levels and progessive hemoconcentration usually indicate impending shock, even though the blood pressure is still normal. If the output of urine is good during the early phase, shock is not so likely to be impending. In the more serious cases a retention catheter should be inserted and the hourly output of urine recorded. An adequate output indicates that sufficient fluids are being given; an inadequate output indicates either insufficient fluids, beginning shock or possible renal damage.

Shock should be anticipated in any patient with as much as 20 *per cent of the body surface involved in second-degree burns or* 10 *per cent of the body surface involved in third-degree burns. Therefore, immediate steps should be taken to prevent it.* Shock may occur in children or debilitated persons with as little as 10 per cent of the body surface involved in a deep blistering burn. Oxygen is indicated in the treatment of shock.

TRANSFUSIONS OF BLOOD ARE ESSENTIAL IN THE EARLY OR SHOCK PHASE OF SEVERE BURNS. The tendency now is to use more blood to combat or pre-

vent shock from burns. It is my opinion that the main reliance in combating or preventing shock should be placed upon blood supplemented with adequate amounts of electrolytes. Of course, plasma, serum albumin, dextran, or various combinations of them supplemented with electrolytes, may be used for this purpose; however, it is better to use them in conjunction with blood. As much as 1,500 cc. of blood, or more, may be indicated for the most severe burns during the first twenty-four hours. Anemia, which frequently occurs in the intermediate period, is not so common when blood transfusions are given in the early period. When anemia and hypoproteinemia occur, there should be no delay in giving frequent blood transfusions.

Dextran has been used by a number of surgeons in research centers in the treatment of shock due to burns. The reports on this preparation have been favorable so far as the prevention and treatment of shock are concerned, but some reactions have occurred, and the serum protein level shows a marked fall after its use. Further trial is indicated, therefore, before final decisions are made concerning its merit.

It is essential to perform typing and cross matching before giving dextran. It is possible that some blood substitute will eventually replace plasma in the treatment of shock from burns because of the number of cases in which hepatitis has followed its use.

The following agents, supplemented with electrolytes, are most frequently used to combat or prevent shock: (1) blood; (2) plasma; (3) serum albumin; (4) dextran, and (5) various combinations of these.

In a case of shock it is essential that most or all of the electrolytes be given intravenously, but when shock is not a factor most investigators agree that the electrolytes and alkaline solutions should be given orally unless there is some contraindication, such as vomiting, etc.

During the first two days, and particularly during the shock phase of severe burns, considerable edema is observed. In the period between forty-eight and ninety-six hours there is usually considerable reabsorption, and it is during this period that caution must be observed not to give too much fluid. In case of respiratory burns this caution is also important, as too much fluid may result in pulmonary edema.

Plasma is indicated in the treatment of severe burns. Its main usefulness is exercised during the first seventy-two hours, and most of the plasma should be given during the first twelve. A number of different methods are available for determining the required amount of plasma, but the following method will usually be found satisfactory: Give 50 to 75 cc. of plasma for each 1 per cent of the body surface involved in a blistering or deep burn (this method is preferred, especially if the patient is seen early, as the hematocrit reading may still be normal).

The amount of plasma to be given during the second twenty-four hours will usually be considerably less than that given during the first twenty-four hour period, often about one-third or one-half. During the third twenty-four hours the amount of plasma will usually be about 25 per cent of that given during the first such period, provided it is still indicated. The amount of plasma should be varied according to the clinical condition of the patient, together with the hematocrit reading and other laboratory data.

In the presence of any severe burn, blood, plasma, electrolytes or some other appropriate agent to prevent or combat shock should be started within a few minutes after the patient reaches the emergency room, phlebotomy being performed if necessary. DO NOT WAIT UNTIL THE BLOOD PRESSURE BEGINS TO FALL BEFORE INSTITUTING ADEQUATE EARLY GENERAL TREATMENT. Even though the patient may not present symptoms of shock when first seen, the surgeon of experience will realize the potentiality of shock and will act promptly to carry out both the early general and the early local treatment. In order to avoid difficulties, it is necessary to comprehend the seriousness of the condition and to understand that profound physiologic changes are taking place.

FROM A PRACTICAL STANDPOINT THE OUTPUT OF URINE IS THE BEST GUIDE TO THE ADEQUACY OF THE FLUID INTAKE. Enough fluids should be given to maintain a urinary output of about 1000 cc. daily. Too much emphasis cannot be placed upon keeping a correct record of fluid intake and output.

EVERY EFFORT SHOULD BE MADE TO ENCOURAGE THE PATIENT TO TAKE AN ADEQUATE AMOUNT OF FLUIDS AND ELECTROLYTES BY MOUTH. When this cannot be accomplished, the fluids and electrolytes should be given through a duodenal tube, provided

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there is no vomiting or other contraindication. Tube feedings are being used more frequently for patients with severe burns, as it is often difficult to keep such a patient in a state of good nutrition by oral feedings alone, particularly if special nursing care is not available.

If the patient is able to take food orally during this early period, the diet should be soft; a high carbohydrate, high protein (200 to 400 gm. daily) diet, with adequate amounts of vitamins, particularly vitamin C and the vitamin B complex. If the patient cannot tolerate a diet of sufficient proteins, then intravenous proteins should be supplied. A determined effort should be made to have these patients gain weight.

Intermediate and Late General Treatments: The intermediate general treatment and the late general treatment will be described together. They are the same, except that there is more urgency in carrying out the intermediate general treatment.

IN THE PAST, NOT ENOUGH EMPHASIS HAS BEEN PLACED ON ADEQUATE NUTRITION IN THE TREATMENT OF BURNS. REGARDLESS OF THE LOCAL METHOD EMPLOYED, SATISFACTORY HEALING WILL NOT BE OBTAINED IF THE PATIENT CONTINUES IN A POOR STATE OF NUTRITION.

The diet listed under "early general treatment" should be continued during the intermediate and late periods. Most diets during these periods of healing are too low in proteins, carbohydrates and vitamins. The patient should be encouraged to take the full diet, as that, together with frequent blood transfusions, is the most effective way to maintain satisfactory nutrition. REPEATED BLOOD TRANSFUSIONS ARE ESSENTIAL IN THESE PERIODS. Liver (administered parenterally) and iron are usually indicated if the burn is severe. During these stages, at least, weekly determinations of the hematocrit reading, the plasma protein level, the erythrocyte count, the hemoglobin content and the value for blood chlorides will be necessary.

Toxemia: Toxemia is often a factor in extensive deep burns. Though it may occur in the early phases, before infection of any consequence has had time to take place, it is always increased by infection. If the burn is not too deep and extensive, and the patient is seen early and treated adequately by the method outlined, toxemia is not ordinarily a great problem. When toxemia with high fever develops it should be treated promptly and energetically, as the patient cannot tolerate high fever of long duration.

CONCLUSIONS

1. Burns are surgical emergencies. Early general and early local treatments should be carried out promptly and simultaneously.
2. The extent and depth of the burns should be recorded on the first examination and the progress of the burns noted at all subsequent dressings.
3. Modified M. C. V. Ointment with adequate occlusive pressure dressing is an excellent method of local treatment. These dressings should not be changed often. This method can be employed with minimal laboratory procedures.
4. It is essential to give sufficient fluids to maintain an adequate urinary output.
5. DEBRIDEMENT OF SEVERE AND EXTENSIVE BURNS IS TO BE CONDEMNED.
6. When second degree burns involve as much as 20 per cent of the body surface, shock should be anticipated. Shock may develop with as little as 10 per cent of the body surface involved in deep burns, particularly in children or debilitated persons.
7. TRANSFUSIONS OF BLOOD ARE INDICATED IN THE EARLY TREATMENT OF BURNS, REGARDLESS OF THE HEMATOCRIT READING. The main reliance in the prevention and treatment of shock should be placed upon blood supplemented with electrolytes. Plasma, serum albumin, dextran, or various combinations of these, supplemented with electrolytes, may be used to prevent or combat shock; however, it is better to use them in conjunction with blood. Frequent transfusions of blood are indicated in the intermediate and late treatment of burns; they improve he plasma protein level more rapidly than do plasma transfusions.
8. Plasma is indicated in the treatment of severe burns. It should be given early and in adequate amounts. Its main usefulness is observed during the first seventy-two hours, and most of it should be given in the first twelve hours.
9. Large quantities of electrolytes-alkaline solutions are usually indicated, and whenever possible they should be given by mouth. Enough

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fluids should be given to maintain an output of at least 1000 cc. of urine per day.

10. Burned patients should be given a high carbohydrate, high protein (200 gms. or more daily) diet with adequate vitamins, particularly vitamin B complex and vitamin C, until healing takes place and throughout the plastic surgical procedures.
11. Regardless of the local method employed, satisfactory healing will not be obtained if the patient continues in a poor state of nutrition.
12. Infections may be a serious problem in the presence of neglected second-degree burns or extensive third-degree burns. When second-degree burns are seen early and treated by the method outlined, infections are not ordinarily of major importance.
13. The grafting of deep burns should be started early, usually not later than the 10th to 14th day, with dermatome split-thickness (thin) grafts. When sufficient large split-thickness grafts can not be obtained, the grafts should be cut in postage-stamp size. If a sufficient number of these small split-thickness grafts can not be obtained in conjunction with pinch grafts, then isografts (hemografts) should be inserted between the autografts.
14. For the correction of contractures and deformities, I recommend dermatome split-thickeness (thick) grafts: Z plastics; releasing incisions and pedicle grafts as indicated.

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ACUTE BARBITURATE INTOXICATION— WITH CASE REPORT*

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It has been said, curiously enough, that the mode of suicide often follows certain cycles. This may well be true, for the incidence of barbiturate poisoning is constantly increasing and seems to be in current vogue. More and more do we hear of deaths or serious intoxications due to this drug. In New York City there were 197 deaths in 1945 as contrasted with only 42 deaths in 1939[1] from poisoning of this type. The United States Tariff Commission reports a steady increase in total production of barbituric acid derivatives over the past 12 years. Their figures show a production in 1940 of 269 tons of barbituric acid derivatives, while in 1951 there were 394.5 tons produced. This is an increase in production of 68% in eleven years.[2] Sleeping pills in 1950 caused about 1000 deaths in this country. This is a far higher toll than that of any other poison or of all narcotics combined. During the past four years an average of 25 deaths occurred each year in the State of Virginia from barbiturate intoxication. Dr. Sidney Kaye, of the State Toxicology Laboratory, tells me that his laboratory receives about 50 emergency calls a year from Richmond and the nearby vicinity for blood barbiturate determinations. In an 18 month period beginning January 1, 1951, and ending June 30, 1952, his laboratory has performed 109 analyses for barbiturates and derivatives.[3] It would seem appropriate that we review briefly the pharmacology of this drug and the means of combating excessive doses.

PHARMACOLOGY

The term barbiturate includes the large number of derivatives of barbituric acid. Some are characterized by their short duration of action such as seconal and pentothal, others by their longer activity as phenobarbital, barbital, and nembutal. Their major function is to depress the central nervous system and any degree of depression from slight sedation to deep coma can be obtained. The intensity of action depends not only upon the particular barbiturate selected, or the dose and route of administration employed, but also in a large measure upon the reflex excitability of the patient's nervous system.

The medullary-respiratory center is directly depressed by large doses of barbiturates and the rate and depth of respirations are decreased. Death often in barbiturate intoxication is due to respiratory failure.

Ordinary hypnotic doses of barbiturates have little effect on the cardio-vascular system but large amounts may result in peripheral vasodilatation with drop in blood pressure, even to shock levels. At this stage the renal blood flow is decreased and urine output is diminished, thus interrupting an important channel for excretion of the drugs.

In the intestinal tract these drugs are readily absorbed, the speed varying with the type. Certain of the drugs are destroyed by the liver while others are excreted by the kidneys, and a few are partially affected by both organs.

It is apparent, then, that in over-dosage of barbiturates a serious vicious cycle may develop with depression of the central nervous system, coma, fall in blood pressure, shock, impaired renal flow and diminished excretion of the drug by the kidneys.

ETIOLOGY OF ACUTE BARBITURATE INTOXICATION

The causes of acute intoxication by barbiturates may roughly be divided into three groups. First, the suicidal attempt in which the patient deliberately takes an over-dose of the drug. The second group are those who accidently take more than is safe. In this group belong the surprisingly large number of patients, who, after taking their accustomed dose fail to develop deep sleep. In this twilight zone, the individual does not exhibit normal inhibition and reason, and mechanically or automatically takes all the remaining tablets.

Finally, are the patients who combine alcohol and barbiturates. These two agents have a synergistic effect which results in profound intoxication and narcosis. Smaller doses by themselves not sufficient to cause toxicity produce serious poisoning and often

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death when taken together. Jetter and McLean[5] and other investigators have regularly been able to cause death in experimental animals by combining non-fatal doses of each drug. Pharmacologic studies, including those of Drs. Haag and Ramsey at the Medical College of Virginia, have shown beyond doubt that the lethal dose of any barbiturate is greatly reduced, often as much as 50%, when given with otherwise small and non-toxic amounts of alcohol.[4]

Signs and Symptoms

The signs and symptoms of acute barbiturate intoxication are extreme lethargy progressing to severe depression of the central nervous system and coma. Respirations are slow and there is capillary dilatation, and shock may develop. Reflexes are sluggish, urine formation is decreased, and there is usually cyanosis. The diagnosis is often made from the history and physical findings or by the presence of the drug in gastric contents, blood or urine. Often an empty or partially filled bottle with sedatives is found near the patient and may give helpful clues.

The prognosis in barbiturate poisoning depends upon many factors. Paramount among these are the amount of drug ingested, the type (whether short or long acting), the duration of time between coma and the time therapy begins, and especially important, the presence or absence of alcohol occurring concomitantly. The general condition of the patient before poisoning is important as well as the incidence of complications such as bronchopneumonia, atelectasis, cardiac arrhythmias or irreversible cerebral tissue changes. Blood levels of four milligrams per cent are considered excessively high but death from barbiturate intoxication has often occured with levels of only one milligram per cent.

The level of barbiturates in the blood, however, may be misleading unless the type of drug is known. A high level of a short acting drug would be less dangerous than of a long acting variety. The presence of barbiturates in the blood 24 to 36 hours after ingestion is in itself evidence that the drug ingested was a long acting type.

Treatment

There is much difference of opinion concerning the treatment of this condition. Certain general measures, enormously important, have universal acceptance and these will be mentioned first. The patient when first suspected of having barbiturate intoxication should have a gastric lavage with the stomach contents saved for toxicological studies for the presence or absence of the drug. The stomach tube should be left down so that liquid feedings may be given at a later time. Absorption of the drug remaining in the bowel may be reduced if a saline cathartic is left in the stomach. Blood should be drawn for barbiturate levels. Oxygen is necessary since adequate oxygenation of the central nervous system is imperative. An efficient aspirator should be at hand—constantly ready to suck out mucus, vomitus, and saliva which may plug a bronchus at any moment without warning. An endotracheal tube should be inserted if signs of laryngospasm develop. The patient should be turned at thirty minute intervals regularly and the foot of his bed elevated to help prevent development of atelectasis and pneumonia. Thorough examinations of the chest must be made repeatedly to detect early the presence of these complications. Penicillin should be started before aspiration or hypostatic pneumonia develops. Fluid balance must be maintained by appropriate fluids given intravenously and by clysis, and urine output checked by indwelling catheter. Total barbiturate excretion may be measured by saving all urine collections. Nourishment can be reasonably well maintained by tube feedings and intravenous glucose.

There is considerable variation in the specific therapy in acute barbiturate intoxication. Eloquent and convincing articles have appeared in the medical literature supporting many different antidotes while damning others.[1,6,7,8,9] No large and well controlled series comparing the various antidotes has yet appeared, and when confronted with the problem the average physician is easily confused as to which program to follow.

Numerous authors believe that the cerebral stimulants are not helpful or necessary and that therapy should be centered on maintenance of free pulmonary ventilation together with the general measures, such as mentioned above. Other groups advocate coramine in large doses giving as much as 10 c.c. intravenously followed every five minutes by 5 c.c. for an hour. This is followed by booster doses of 5 c.c. every thirty mintues until the patient can answer questions.

The amphetamines, Benzedrine and Dexedrine, are favored by many for specific therapy because these drugs exert powerful cortical and respiratory stim-

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ulation. Massive doses may be given without causing convulsions or other untoward reactions. As much as 2000 mgm. have been given over a 24 hour period without deleterious effects to the patient. Schedules of 10-20 mgm. intravenously repeated as often as every five minutes are recommended. Dick,[1] Friedman and Harris[8] and others use intravenous doses up to 100 mgm. every half hour until the patient responds and they report good results. Reed, Driggs, and Foote,[6] however, report a high incidence of cardiac arrhythmias and some cardiac deaths following large doses of the amphetamines. They stress the powerful stimulus of these drugs on the myocardium which may lead to fatal arrhythmias. Hypertension and arteriosclerosis are not thought to be contraindications although the blood pressure may rise sharply following a moderate dose. Repeated injections seem to develop a tolerance to the pressor effect of the drug and after several injections larger doses can be given without appreciable rise in the blood pressure.

Picrotoxin is thought by many to be the drug of choice in treating barbiturate poisoning. This drug is a powerful central nervous system stimulant. It stimulates the medulla, midbrain, and to a less extent the cerebral cortex and cord. The action is most prominent in the medulla, and the vomiting, respiratory, and vasomotor centers are all stimulated. Large doses may cause convulsions. The drug is rapidly excreted and after twenty minutes all traces of the drug disappears from the blood stream.

During the past twenty years this drug has had an increasing popularity in combating the effects of excessive barbiturates. No didactic statement regarding dosage can be made; but the drug is given until return of the corneal and pupillary reflexes. Repeated injections may be necessary as the patient often will lapse back into coma since the effect of the drug as mentioned above is only of short duration. The drug should be given slowly and intravenously. The patient should be observed closely during the injection for signs of muscular twitching or for return of any reflexes. This routine should be repeated every 30 to 60 minutes until the patient remains conscious or at least responds to stimuli. It is often overlooked that a patient with barbiturate intoxication is extremely tolerant to picrotoxin and during treatment may receive amounts which under normal conditions would be fatal. Goodman and Gilman, in their textbook on pharmacology, refer to a case successfully treated with 671 mgm. of the drug.[10]

The following case is presented to illustrate severe barbiturate intoxication complicated by alcoholism and bronchopneumonia, and responding to the general measures already mentioned together with massive doses of picrotoxin.

CASE REPORT

S. C., a 45 year old white housewife, had been in her usual health until five days before admission to the hospital. At that time she went to New York, drank heavily and ate and slept little. She returned to Richmond on March 13, 1951, and was said to have had at least three drinks of whiskey that evening and sat up much of the night with a sick dog. In the morning when her husband left to go to work she was apparently asleep and he did not disturb her. According to her maid she did not awaken during the day and at six in the evening could not be aroused. She was first seen at seven and was deeply comatose and cyanotic. She was brought in this condition to the hospital.

On admission she was a well developed, well nourished white woman who was cyanotic and deeply comatose. She made no response to painful stimuli. Respirations were shallow, noisy, and the rate was 20. Her lungs were clear to percussion but rhonchi were heard throughout. The pulse was 100, the rhythm regular. The blood pressure was 118-80. Reflexes were very sluggish but equal. Examination otherwise was not remarkable.

Admission laboratory studies were within normal limits. Blood drawn for barbiturate level was later reported as 6 mgm. per cent. A blood alcohol level unfortunately was not done. The gastric contents were reported as positive for the presence of barbiturates.

The patient was given oxygen immediately, the foot of her bed elevated, penicillin was started, and an aspirator was used periodically to remove phlegm, saliva, and mucus from her trachea. She was turned regularly, fluids were given by vein, clysis, and stomach tube and the urinary output was checked by an indwelling catheter.

In view of the depth of her coma she was started on picrotoxin in doses of one to two cc. slowly by vein in concentrations of three mgm. per cc. This was given approximately every one to two hours for about

thirty-six hours but without response by the patient. During this time she developed signs of bronchopneumonia and her temperature rose to 104°.

By this time the patient's general condition was extremely poor. Her blood pressure on several occasions was as low as 80/50, her respirations were 12 to 15 and Cheyne-Stokes in type. It was decided to give larger doses of picrotoxin and 13 cc. of the drug was given by vein. At this point she developed twitching of her upper lip and the drug was stopped. Shortly afterwards she was again comatose and an hour later another 10 cc. was given. This was discontinued when she began moaning. Later she vomited. Approximately every one or two hours thereafter the patient was given 10 to 30 cc. of picrotoxin always slowly and always discontinued at the first sign of any response. These reactions consisted of muscular twitching, moaning, vomiting, or moving an extremity, and, later, opening of the eyes for brief intervals. The effects of the picrotoxin were always of short duration and the patient would lapse back again into coma.

Twenty-four hours later after the drug had been started in the large doses, during which some 263 cc. (or 789 mgm.) of picrotoxin had been given, the patient began to respond noticeably to the drug to the extent of opening her eyes, smiling, or coughing. Twelve hours and 75 cc. later she was awake enough to sip small amounts of coffee from a cup and to give feeble responses to simple questions.

At this time the patient was started on 5 to 10 mgm. of dexedrine sulfate at 4 to 6 hours intervals and she recovered uneventfully several days later. Her pneumonia cleared up promptly.

During the period of coma which lasted 110 hours after entry to the hospital the patient received a total of 1473 mgm. of picrotoxin. 1317 mgm. of this drug, however, were given over only a 66 hour period.

Upon recovery the patient stated that she had taken "several" phenobarbital tablets upon going to bed and did not recall taking any more. Suicidal intent was vigorously denied. Five days after admission, when she was conscious and oriented, her blood barbiturate level was still 2 mgm. per cent. This would indicate clearly the long acting nature of the drug as well as the slowness of its excretion.

Summary

In summary, the use of barbiturates and their derivatives is steadily increasing. This is evidenced by a 68% increase in the total production of this drug in the year 1951 over that produced in 1940. Poisoning by barbiturates whether accidental or intentional likewise is increasing. The remarkable synergism between alcohol and barbiturates is stressed and the dangers of their concomitant use are emphasized. Severe narcosis or even death may occur when only one-half the lethal dose of each drug is combined. Many poisonings result from ignorance of this fact.

Treatment of barbiturate intoxication consists of careful adherence to such general measures as gastric lavage, adequate oxygenation, prophylactic use of antibiotics, prevention of atelectasis and aspiration by keeping a patent broncho-tracheal air way and frequent turning, and maintaining proper fluid balance. Specific therapy is discussed, including the use of the amphetamines and picrotoxin. Picrotoxin, in the author's opinion, is the drug of choice. This powerful central nervous system stimulant can be safely given if discontinued promptly at the first signs of muscular or nervous stimulation. Its action is short lasting since it is excreted in about 20 minutes. For this reason and because in the presence of barbiturate intoxications larger doses are easily tolerated, picrotoxin can and should be given in quantities sufficient to cause stimulation. Such large doses should be given almost hourly until the patient remains responsive between injections.

The patient deeply intoxicated by one of the barbiturates, like the person in diabetic coma or in other medical emergencies, requires constant and careful nursing and medical attention. Such personal supervision and vigorous treatment will influence greatly the chances of his survival.

A case of severe barbiturate intoxication complicated by alcoholism and pneumonia successfully treated by massive doses of picrotoxin is presented.

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VIOFORM—ITS USE IN DERMATOLOGIC THERAPY

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"Vioform"* (R) 5-chloro-7-iodo-8-hydroxyquinoline, is a well known drug, used as an amebicide, as a dusting powder for wounds, and for monilial and trichomonas infections of the vaginal tract.

Although the preparation has been used for years by European dermatologists, and although introduced into dermatologic therapy in this country by Sulzberger as far back as 1929, only a scant literature reference has accumulated with the use of vioform in the treatment of diseases of the skin.

The mechanism of action of this drug is unknown, but it has been found effective in a wide variety of dermatoses, particularly in those due to fungus infections, or caused by such pyogenic organisms as the streptococcus and staphylococcus. The drug has also been found useful in a number of conditions which are complicated by secondary infection with pyogenic organisms and fungi. Vioform has thus proved useful in the treatment of macerated and secondarily infected fungus infections of the skin, herpes simplex, impetigo, sycosis vulgaris, eczematous eruptions, atopic dermatitis, psoriasis, particularly where there is maceration in the body folds, pruritus ani and vulvae, and seborrheic dermatitis.

Vioform has been used with favorable results by a number of investigators[1,2,3,4,5,6,7,8,9,10,11]. Saunders[12], in a study of 14 cases, was unfavorably impressed by an inordinately high incidence of irritation and sensitization.

It is believed that an experience involving the use of vioform in a washable ointment base will be of interest. Over 492 cases, comprising a wide variety of dermatoses, were treated. Of these cases, 318 have been followed sufficiently to determine the value of treatment.

The results of treatment with an ointment containing 3% vioform powder in Unibase †(R) have been so satisfactory, it is felt that certain conclusions regarding its efficacy may be drawn from a study of these cases.

The patients ranged in age between 3 months and 88 years. There were almost equal numbers of males and females.

The following table presents the results of treatment in the 318 cases on whom adequate follow-up observations were available.

The results have been classified as follows: Good results, in which it was concluded that the vioform ointment played a major part in the disappearance of the eruption; doubtful results, in which improvement was noted, but the patient either experienced a recurrence, or other remedies were necessary to bring about final healing; failure, in which the eruption was either unimproved or became worse.

Diagnosis	Number	Good	Doubtful	Failed
Atopic Dermatitis	10	5	3	2
Dermatophytid	52	44	3	5
Eczematous Dermatitis (Unclassified)	18	8	7	3
Eczematous Dermatitis (Hands)	35	24	4	7
Infec. Eczematoid Dermatitis	28	25	3	
Impetigo	13	10	2	1
Neurodermatitis (Circumscribed)	3		3	
Nummular Eczema	12	10	1	1
Pruritus Ani & Vulvae	12	9	1	2
Psoriasis	8	4	1	3
Pyoderma	28	25		3
Seborrheic Dermatitis	44	32	3	9
Sycosis Vulgaris	8	8		
Ulcer of leg (Unclassified)	4	4		
Varicose Eczema	19	14	3	2
Varicose Ulcer	4	4		
Miscellaneous Dermatoses	20	Discussed individually below.		

Twenty patients with miscellaneous dermatoses were treated topically with the vioform ointment.

Two cases of dyshidrosis involving the fingers responded promptly. Two patients with infectious eczematoid dermatitis originating in radio-dermatitis, were treated with good results. In one such case the result was doubtful. One case each of multiple paronychias, herpes simplex, infected burn injury, furunculosis, vesiculo-bullous erythema multiforme, infected wart, sulfonamide dermatitis, senile pruritus, infected molluscum contagiosum lesions, were classified as good results, as were two cases of sec-

*Vioform is manufactured by Ciba Pharmaceutical Products, Incorporated, Summit, New Jersey.

†Unibase is manufactured by Parke, Davis and Co., Detroit 32, Michigan.

ondary infected poison ivy dermatitis. It is believed that the ointment was useful in preventing reinfection of the adjacent hair follicles in the case of furunculosis. Two cases of chronic discoid lupus erythematosis, one of chronic paronychia, and one of acne necrotica were clearly failures.

Irritation was noticed in seven cases, four of which were dermatophytids, one a case of psoriasis, and two pyodermas.

Comment

Vioform is singularly free of primary irritation. It will be noted that only seven cases showed evidence of irritation due to the ointment. No cases of sensitization were encountered in the group of cases studied, although sensitization can be anticipated in a small percentage of cases. This is true of any topical application.

The drug may be used without fear of incompatibility with such substances as mercury, tar, sulfur, and resorcin. On numerous occasions, it was used following treatment with these drugs, or these substances were used after the application of vioform. Systemic toxicity is lacking.

One unfortunate quality of the drug is its capacity for staining the hair and clothing, but this is minimal if certain precautions are taken. Application of the ointment to the affected part, followed by bandaging, is sufficient to protect the clothing and bed-clothing.

Because of staining, it is somewhat inconvenient to use vioform in the vicinity of the ears, face, and back of the neck. However, the results in many cases of eruptions in this region have been so satisfactory that the attendant inconvenience is often justified.

It must be pointed out that the results reported are in the nature of clinical impressions, which are, however, often very trustworthy. It is often difficult to arrive at a strict etiologic diagnosis in many dermatoses, since many eruptions are secondarily infected with fungi and cocci, irritated, and sensitized by local therapy, or because in many cases the specific cause is unknown, or due to widely diverse and changing etiologic factors. Practically all cases in which the ointment was used, outside of the miscellaneous group, were improved by the use of vioform. In many cases the results were spectacular and rapid, and in others, steady and progressive, but in most of them there was improvement. In many of the cases classified doubtful, there was usually some initial improvement, but progress was unsustained, and it became necessary to use other medications. It was the impression that vioform was often instrumental in initiating the healing process, but was unable to sustain it after it passed a certain point, necessitating a change in therapy. Possibly some of the improvement was due to reasons difficult to evaluate, such as a change of physician, a change in the emotional status of the patient, or the natural evolution of the disease process.

It was impressive to see a number of eruptions of various types, which had not responded to a wide variety of treatment regimes over a period of months or years, quickly improve under topical vioform therapy. This was particularly striking in cases of nummular eczema, seborrheic dermatitis, eczematous dermatitis of various kinds, especially eczemas of the hands and ears, infectious eczematoid dermatitis, pruritus vulvae and ani, and varicose ulcer and eczema.

In some instances in which there was recurrence, the patient was at least free of his disturbing symptoms for periods of weeks or months before relapse. In these cases, the origin of the eruption was often obscure, and recurrences probably represented a return to former habits, exposure to irritants previously encountered which precipitated the original condition, or a repetition of unfortunate emotional stimuli.

Summary and Conclusions

Vioform incorporated in a washable base is an exceedingly versatile, and effective remedy in topical therapy. Instances of irritation were few, and in this series of cases there were no examples of sensitivity, although these could be anticipated in a larger series.

Vioform as a topical application is particularly useful in eczematous dermatitis, eczemas of the hands, and pruritus ani and vulvae.

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New Hormone Ointment Aids in Treatment of Skin Disorders.

Hydrocortisone (Compound F) acetate ointment (one of the newer adrenal hormone preparations) has proved of definite value in the treatment of certain skin disorders, according to Drs. Marion B. Sulzberger and Victor H. Witten, New York, and Dr. C. Conrad Smith, Valley Stream, N. Y., in the Feb. 7 J.A.M.A.

Satisfactory improvement following topical use of the ointment was obtained in 20 of 30 cases of atopic dermatitis, and in 14 of 28 cases of such other skin afflictions as psoriasis, contact dermatitis and eczema.

Persons with various types of long-standing skin disorders were treated with this new ointment for periods ranging up to eight months. In most cases, the conditions were known to be refractory to many forms of topical therapy.

In those cases where the response was favorable, improvement usually was apparent within 24 to 48 hours, although it sometimes was not obvious for a week, the doctors stated. Improvement was, for the most part, maintained during the entire time the ointment was used. When application of the ointment was discontinued, the therapeutic effects usually wore off within four to five days.

"While in most of the cases atopic dermatitis improved more than 75 per cent, and some few approached almost complete healing, this progress was not always continuous," the doctors added. "In spite of continued and regular applications of the ointment, there were occasional mild flare-ups of the dermatitis, following which improvement was again noted.

"It is of particular importance that in no case was there any clinical evidence whatsoever of adverse systemic effects produced by topical application of the drug. Furthermore, there were no instances of allergic contact sensitization to the hydrocortisone acetate.

"It is fortunate and advantageous that these ointments are aesthetically and cosmetically acceptable. They do not stain skin or clothing, generally do not sting or burn when applied, and do not have a disagreeable odor (if any at all). Actually, when well rubbed in, they are hardly visible."

As with any new therapeutic agent, prolonged and careful observations should be made to discover if there are any alterations in bodily physiology or biochemistry as a result of the topical applications, the doctors stressed. In addition, further studies should be made to elucidate the precise mechanisms by which the local therapeutic effects are achieved.

The ointment is available on physicians' prescription only.

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RAPIDLY FATAL HODGKIN'S DISEASE

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Hodgkin's disease rarely occurs in an acute rapidly fatal form. A case of approximately five weeks duration from onset until death, in which fever was the predominant manifestation, is reported.

Case Report

N.M.P., a 75-year old white housewife, was hospitalized on December 25, 1950, because of fever for approximately three weeks. The patient had been seen in the home eighteen days previously at which time fever had been present for one week. The physical examination was negative. Penicillin (300,000 units) was administered intramuscularly and 250 mg. of aureomycin were prescribed for 8 doses. Nothing further was heard until two days before admission when her husband reported that no improvement had taken place, and that she was now too weak to leave her bed. A temperature record kept by the patient's husband for several days indicated a double quotidian intermittent curve during each twenty-four hour period with peak levels of 102°F. and 103°F. She was reexamined and again no cause was found for the fever. A urinalysis was negative except for considerable albumen. Chloromycetin was started in a dose of 250 mg. every four hours. A total of 4 gm. was administered without change in the febrile course. There were no specific complaints aside from a slight nonproductive cough and poor appetite. There was a tendency to drowsiness. Her husband noted that when the temperature rose to high levels the patient became confused and disoriented.

This woman had been a patient of the author since 1947. She was a small, frail lady who always complained of weakness, lack of appetite and poor memory. No striking abnormalities other than generalized arteriosclerosis and a mild postoperative hypothyroidism (thyroidectomy in 1921) were noted. Bronchopneumonia necessitated hospitalization in March, 1947, but there was complete recovery after a rather stormy though uncomplicated illness. She had been seen infrequently thereafter, but usually for minor respiratory infections. A mild cystitis without fever responded to a sulfonamide drug in August, 1950.

The physical examination on admission revealed the temperature to be 100°F., the pulse 86, the respiratory rate 20, and the blood pressure 130/80. The patient was a small, thin, pallid elderly woman in no distress though somewhat drowsy and confused. The skin was dry and scaly, but there was no eruption or icterus. Sclerae were clear. Pupils were contracted and unreactive. Fundi were normal. Mucous membranes were pale and dry. Tongue was smooth. Teeth were artificial. Throat was negative. Neck was supple. There was a thyroidectomy scar. No superficial glands were palpable. Breasts were atrophic and contained no masses. Heart and lungs were normal. Abdomen was moderately distended but peristalsis was normally active. Liver, spleen and kidneys were not palpable. Percussion did not indicate liver enlargement. The pelvic examination was normal. There was a rosette of large external hemorrhoids. The rectum contained a soft yellow stool. Joints and extremities were normal. Neurological examination was essentially negative.

Laboratory examination disclosed a normochromic normocytic anemia, the red blood count being 3,050,000, the hemoglobin 58 per cent and the hematocrit 32 per cent. The total leucocytes numbered 5,450, 5,300, 5,400 and 8,500 on separate determinations. The differential was entirely normal. The sedimentation rate was 31 mm. in one hour (Cutler). A catheterized urine on admission contained albumen in abundance and a large number of hyaline, finely and coarsely granular casts but was negative otherwise. The blood nonprotein nitrogen was 45 mg. per cent and the plasma chlorides 610 mg. per cent. The stool was negative for occult blood. Spinal fluid was under no increase in pressure, crystal clear, contained no cells, 25 mg. of protein, and the serology was negative. Studies to determine an infectious basis for the fever were negative. These included four blood cultures, smear for malaria parasites, stool culture and bacterial agglutinations. Two roentgenograms of the chest were negative and a flat film of the abdomen revealed gaseous distention of stomach and intestines, but no shadows characteristic of obstruction.

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The course in the hospital was one of rapid and progressive deterioration. There was a hectic spiking temperature with wide fluctuations varying from normal to 105°F. and accompanied by frequent, shaking chills (Fig. 1). The heart rate was dis-

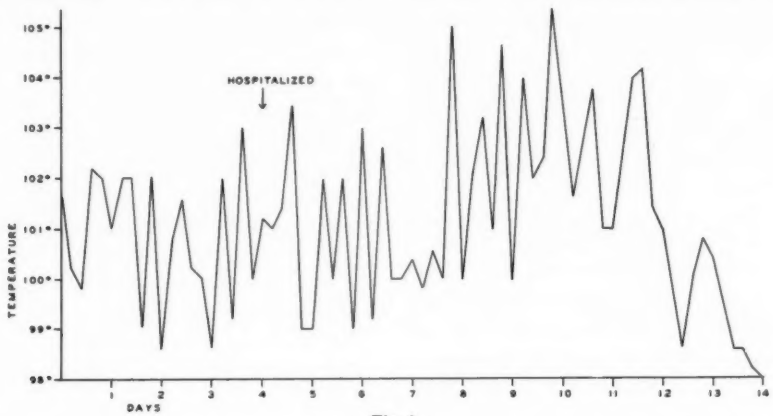

Fig. 1

proportionately slow. Marked abdominal distention developed but the patient did not vomit and continued to pass gas and feces.

On the premise that we might be dealing with an overwhelming septicemia, large doses of penicillin and streptomycin were administered intramuscularly. Supportive treatment included intravenous fluids and transfusions of whole blood. These measures failed to alter the patient's desperate plight. Stupor faded into coma as the signs of pulmonary edema made their appearance and the blood nonprotein nitrogen rose to 84 mg. per cent terminally. Death occurred on the twelfth hospital day which was the thirty-seventh day after the onset of the illness.

Postmortem examination* was performed one hour after death. The body was that of a small, elderly, poorly nourished woman. An estimated 200 to 300 cubic centimeters of straw colored fluid were present in each pleural cavity. Dense fibrous adhesions were encountered over the entire surface of the right lung. A healed tuberculous focus was found in the left apex. The right upper and middle lobes revealed areas of bronchopneumonia. The pericardium contained a small amount of fluid. The heart was essentially normal except for minimal coronary and aortic atherosclerotic changes. There was no ascitic fluid. The liver was normal in size and gross appearance. The spleen was slightly enlarged. Its cut surface was dark red and somewhat soft. The kidneys presented a finely granular surface but on section were not grossly abnormal.

The entire gastrointestinal tract was carefully examined. Only the stomach revealed pathological changes. The mucosa was pale and smooth, rugae being totally absent. The gastric wall was thickened. In the cardia, there was a small nodule projecting on the surface but covered by intact mucosa and surrounded by numerous hemorrhagic areas. No ulceration was observed. The stomach was considerably reduced in size and gave the general appearance of an atrophic gastritis. Gall bladder, pancreas, and genital organs were normal.

Miscroscopic examination: The lesions of Hodgkin's disease* were found in the spleen, liver, stomach and perigastric glands. Detailed study of the spleen revealed that most of the Malpighian bodies, though discernible, were widely separated, and in many there were extensive necrotizing changes of fibrinoid character near their center in juxta-position to the central arteriole. The changes in the pulp consisted of reticulum hyperplasia, infiltration of the wall of the sinusoids and trabeculae, filling of the sinusoids with a variety of cells including lymphocytes, large macrophages, desquamated endothelial elements, plasma cells and others not readily identified. The cellular composition of the pulp was characterized by extreme pleomorphism and the presence of numerous multinucleated giant cells of the Sternberg-Reed type which were found lying free in the sinusoids

*By Dr. J. H. Scherer.

*As reported by Dr. Paul Kimmelstiel. Sections were examined by Drs. Scherer, R. H. Follis, Jr., and Paul Kimmelstiel, who concurred in the diagnosis.

or in continuity with the reticulum. The basic structure of the liver was normal except in Glisson's triangles where numerous foci of infiltration with plemorphic round cells, some containing Sternberg-Reed cells, were noted. The stomach wall in the region of the fundus contained a large tumorous mass of granulation tissue apparently situated in the outer portion of the muscularis, infiltrating and destroying the muscularis proper and extending in one area into the thickened submucosa. This tissue was composed of fibroblasts, capillaries and a dense accumulation of pleomorphic cells essentially similar to those described in the spleen, as well as foci of fibrosis and small areas of necrosis. Another section through the stomach was not infiltrated by Hodgkin's tissue. Glands removed from the cardia revealed a complete loss of normal architecture which was replaced by the type of granulation tissue described previously.

Hodgkin's involvement was not observed in the myocardium, lung or kidney. Irregularly scattered foci of bronchopneumonia suggestive of aspiration were found in the lungs. In the renal cortex was noted acute tubular dilatation with flattening of epithelial cells considered to be evidence of terminal oliguria and associated metabolic changes. In addition there were small foci of pyelonephritic scarring, some fibrosis of glomeruli and moderate generalized vascular sclerosis.

The pathological diagnoses were listed as Hodgkin's granulomatosis involving spleen, liver, stomach wall and perigastric glands; atrophic gastritis; so-called shock kidney; aspiration bronchopneumonia; and healed tuberculosis in the apex of the left lung.

Comment

Hodgkin's disease[1] is a chronic, protracted, slowly progressive illness in the majority of cases. It has been estimated that in about 60 per cent the duration of life varies from two to six years, and in another 20 per cent survival is longer than six years. There are more rapid forms fatal after a few months. Death results from visceral involvement and its complications rather than cachexia. Acute fulminating types have been observed infrequently. Exodus[2,3,4] has taken place in as short a time as eight days, and fatalities have been reported several weeks after onset. These patients[4] may run a septic course with high fever and chills suggesting bacteremia. Profound toxemia, anemia, leucocytosis, hepatosplenomegaly, generalized lymph gland enlargement and jaundice may be present in this rapidly over-whelming form of the disease. In some atypical cases, however, antemortem diagnosis may be impossible due largely to the absence of accessible tissue for biopsy. On the basis of histopathologic study alone, it is practically impossible to separate the acute from the chronic case since there is no uniform correlation of tissue morphology and clinical course[5,6,7].

An antemortem diagnosis in our patient was impossible since the disease was confined solely to the abdominal cavity. Indeed, it was only after examination of microscopic sections obtained at necropsy that a pathological diagnosis could be positively established. Obviously cases of this type are for the most part of academic interest only. However, we should like to emphasize the importance of considering an acute form of Hodgkin's granulomatosis whenever the problem of a fulminating febrile illness is encountered.

Summary

A case of Hodgkin's disease fatal thirty-seven days after onset and characterized by a fulminating febrile course, profound toxemia, a moderately severe anemia, the striking absence of hepatosplenomegaly and peripheral or mediastinal lymphadenopathy has been reported.

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XUM

THE CLINICAL MANAGEMENT OF THE PULMONARY INVALID*

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The clinical management of certain chronic broncho-pulmonary diseases presents a problem of considerable difficulty. Such conditions as chronic bronchitis, pulmonary emphysema and fibrosis, and inoperable bronchiectasis are characterized pathologically by tissue alterations of the bronchial tree and adjacent lung parenchyma which are usually both progressive and irreversible. In addition, as these changes become widespread, they so interfere with normal pulmonary function that the respiratory demands of physical activity cannot properly be fulfilled and the eventual result is an invalid or semi-invalid state. The distressing nature of these conditions has served to surround them with abundant pessimism concerning their therapy.

In recent years, however, a firmer understanding of respiratory physiology and advances in antibiotic therapy has led to certain important considerations which promise a more successful management of these diseases.

The purpose of this paper is to review briefly these newer concepts as they apply to therapy, particularly in relation to antibiotics, oxygen administration, and mechanical methods of bronchial drainage.

ANTIBIOTICS

Among the most important of the recent advances in the treatment of chronic lung disease is the development of antibiotic therapy for bronchial infections. It has long been recognized that infection not only may be a predisposing factor in the development of chronic lung change, but that an inflammatory process superimposed on a previously chronically diseased bronchus may cause further histological damage and that after each episode of acute infection the patient may be left with his disease a little more advanced and his symptoms a little more distressing. For this reason, the effective control of acute exacerbations of bronchopulmonary infection is desirable, not only for therapy of the immediate problem but in an attempt to prevent progression of the underlying chronic disease. This control is better accomplished since the introduction of antibiotic therapy.

With the present availability of a variety of antibiotics, the question of the drug to be employed, its duration and dosage, poses difficult problems. For the control of acute bronchopulmonary infections which follow acute upper respiratory infections it is generally accepted that the broad spectrum antibiotics are preferable to penicillin. When aureomycin, terramycin, or chloromycetin are begun on the third or fifth day after the onset of an acute coryza or pharyngitis, prompt control of sinus or bronchial infections frequently follows. Since these drugs have no effect on the common cold itself, it is generally unprofitable to employ them at the onset of coryza since treatment may have to be terminated because of undesirable side effects at a time when their administration is especially indicated, that is, when the signs of pyogenic bronchial infection are manifest. Although penicillin is therapeutically effective in the control of infections due to gram-positive bacteria, the incidence of allergic reactions to this substance is notably higher than to either aureomycin, terramycin, or chloromycetin. The use of these latter drugs is not without danger, however, and in the *prolonged* treatment of chronic bronchial infection, which is frequently desirable in an attempt to eradicate chronic bronchitis or to arrest infection in bronchiectasis, penicillin is regarded as the drug of choice despite the possibility of allergic reactions, since the long-continued use of the broad spectrum antibiotics involves the risk of a new infection by organisms not previously pathogenic. The danger of allergic reactions to penicillin in these cases appears to be less menacing than persistent infection with a more highly resistant organism such as B. Proteus, B. Pyocyaneus, and yeast for which curative treatment is not now available.

In certain cases, bacteriological studies would seem to indicate the desirability of using combined antibiotic therapy for the simultaneous eradication of gram-positive and gram-negative organisms with a penicillin-streptomycin or penicillin broad-spectrum combination. In these instances, Barach and associates point out the danger of resistant organism invasion and feel that combined therapy is a greater risk than is the initial use of penicillin and the subsequent use of terramycin, chloromycetin, strep-

*Read before the annual meeting of The Medical Society of Virginia at Richmond, September 28-October 1, 1952.

tomycin or aureomycin for relatively brief periods to augument the effectiveness of long continued penicillin treatment. Penicillin is thus the mainstay of long continued treatment, not only to avoid infection with highly resistant organisms, but, also because infections of the lungs are for the most part due to gram-positive organisms.

While the broad spectrum antibiotics are found in effective concentrations in the broncho-pulmonary system after oral ingestion and can be used in the usual dosage by this route, the pulmonary tissue barriers established by chronic bronchial disease prevent the penetration of penicillen in sufficient amounts at the site of infection when administered by the parenteral route. For this reason, penicillin is usually employed by one of the various aerosol methods when used in chronic pulmonary disease. Particularly in long term therapy, the aerosol inhalation of penicillin in combination with a bronchodilator several times daily is by far the most effective, practical, and inexpensive method of long term control of bronchial infection.

Recent studies, however, have indicated that a comparatively new product, diethylaminoethyl ester of penicillin, now marketed under the name Neo-Penil, has a special value in bronchopulmonary infection, comparable in some respects to the effective employment of aerosol penicillin. As shown by Jensen, and confirmed by Heathcote and others, concentrations of this drug in the lungs after intramuscular injection are five to ten times higher than that of benzyl penicillin, and effective concentrations in the sputum have also been confirmed. It seems likely that this drug, usually employed in the intramuscular dosage of 500,000 units twice daily, will in some way replace aerosol penicillin in the treatment of chronic broncho-pulmonary disease.

Oxygen

The second important therapeutic measure in the management of chronic lung disease is oxygen administration. Long in use as a method of treatment for the dyspneic patient, this measure has undergone considerable change as a result of recent physiological studies. As pointed out by Dr. Guerrant in his excellent paper, respiration consists of two phases, ventilation, or the mechanical displacement of gases, and alveolor respiration, or the diffusion of gases through the alveolar capillary membrane. Clinically, interference with ventilatory function is marked by dyspnea, alveolar respiratory failure by hypoxemia. While dyspnea is clinically evident in its early stages, hypoxemia can only be recognized when it is of such degree as to produce cyanosis. Unfortunately, since cyanosis is usually evident only when as much as five grams of hemoglobin is in the reduced state, rather severe grades of hypoxemia may exist before the physician becomes aware of them and until a more simple measure of reduced hemoglobin is available hypoxemia may only be suspected by such signs as mental confusion.

Furthermore, both dyspnea and hypoxemia are often combined in the same patient. Obviously if ventilation falls below a certain point hypoxemia is sure to result and similarly the hypoxic patient is usually also dyspneic. The problem in any patient, however, is to understand the mechanisms producing the total picture. This means that factors giving rise to dyspnea must be treated mechanically—by aspiration of secretions, relief of bronchial spasm, etc.—while hypoxemia calls for oxygen. The usual error is to try to use oxygen for all parts of respiratory inadequacy. It is obvious, then, that pulmonary insufficiency resulting from tenacious secretions in bronchiectasis or from mechanical obstruction in broncho-spastic emphysema will not be benefited by oxygen alone until the ventilatory pathways are made patent, while in pulmonary fibrosis with thickening and inadaquacy of the alveolar capillary wall, oxygen may be of great benefit.

When oxygen is indicated in chronic lung disease, particularly emphysema and fibrosis, its administration is not without danger. It has long been noted that patients with pulmonary emphysema receiving oxygen frequently developed delirium, coma, and, at times, death. Recent investigations indicate that emphysema patients may develop respiratory depression during oxygen therapy with resulting retention of carbon dioxide. This in turn causes increased intracranial pressure, giving rise to the symptoms of oxygen intoxication. Cardon and others deny that such a condition exists and state that they find no ill effects in the use of 100% oxygen in such patients, but the preponderance of evidence seems to indicate that the cautious use of oxygen is the better part of valor. In a series of emphysema patients who were given oxygen by nasal catheter, beginning at one liter per minute the first day and increasing by one liter daily until a total of six was given, no undesirable effects were noted. This

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method seems to be safe and desirable.

MECHANICAL DRAINAGE

Mechanical drainage is the third important mechanism in chronic lung disease management. The methods by which obstructed airways may be cleared are numerous, but the most important are bronchial aspiration, postural drainage, the production of cough to remove mucoid and mucopurielent secretions, and use of broncho-dilator drugs for relief of spastic phenomena.

Although the cough induced by postural drainage in bronchiectasis is recognized as beneficial, the importance of deliberate coughing in other chronic respiratory diseases is not adequately appreciated. Indeed, it is frequently regarded as harmful and treated with cough suppressants. But in chronic bronchitis, pulmonary emphysema, pulmonary fibrosis, and even in bronchial asthma, cough represents a highly effective means of clearing the bronchial tree of secretions. For this reason, patients with chronic lung disease should be encouraged to cough, not only in acute infective stages, but routinely as a part of the day to day management of their disease. The production of cough is frequently accomplished by the introduction of foreign matter into the bronchial tree. A satisfactory method is the use of broncho-dilator aerosols in the form of epinephrine of neosynephrine, which serve the dual purpose of relieving broncho-spasm and promoting cough. If cough does not result from these procedures, or if secretions are tenacious, expectorant mixtures may be used. Sedative cough preparations are rarely if ever indicated in chronic broncho-pulmonary disease.

For purposes of cough production and increased pulmonary ventilation, a great deal of work has recently been done on such procedures as mechanical cough chambers, negative pressure breathing, intermittent pressure breathing, etc., but discussion of these procedures is not within the scope of this paper.

OTHER METHODS

While antibiotic therapy, oxygen administration, mechanical drainage, and broncho-dilator drugs are the principal methods of therapy in the management of chronic lung disease, certain other methods contribute greatly to the comfort and well-being of these patients. Proper attention to the general health of the patient, adequate nutrition, rest, elimination of other illnesses, protection from climatic changes and extremes, and other general measures are noteworthy. Elimination of lung irritants, such as tobacco, fumes, dust, and gases, contribute to his comfort, and a thermostatic environment in work and home are sometimes of considerable benefit. Steroid hormones deserve consideration because of their value in bronchial asthma and also because of their promise in broncho-spastic emphysema. But the primary factors are those discussed above.

SUMMARY

The management of chronic lung disease has three important objectives. The day to day management of the patient, the treatment of acute exacerbations with superimposed infection, and the prevention of future pulmonary tissue damage. The use of antibiotic therapy, the judicious use of oxygen administration, and the free promotion of bronchial drainage, all directed toward re-establishment of physiological respiratory function, are important methods of accomplishing these objectives. Recent physiological considerations of these methods have been discussed.

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PARACENTESIS ABDOMINIS*

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Abdominal ascites, fluid in the peritoneal cavity—allow me to describe briefly a very old operation for this condition, which all of you know well. A point is selected halfway between the umbilicus and the anterior superior spine of the left ilium. Under novocain anaesthesia a small skin incision is made. A large trocar and cannula are introduced into the abdominal cavity and the trocar is withdrawn. A large catheter with many holes is inserted through the cannula. The cannula is withdrawn and a second catheter with many holes is introduced in the same manner. These catheters are sewed in with nylon or silk. The two catheters are then connected to a single tube, which is put into a bottle by the side of the bed, and the abdomen is decompressed slowly over a number of hours. Some of the objections to this operation may be noted as follows: Danger of infection, causing a low grade peritonitis, leaking of fluid around the tubes, causing wet dressings, frequent change of dressings and discomfort to the patient. Later, when the catheters are removed, more leakage, more wet dressings and more discomfort. Tapping again often becomes necessary within a few weeks, and may have to be done over and over again until the end or lethal exodus.

Now I would like to outline another operation for this condition in the female, which operation may be new and better. The vagina is sterilized as far as possible. Sodium pentothal, intravenously is a desirable anaesthetic. The patient needs very little anaesthetic and for a very short period of time. With morphine and seconal, this operation can be done without a general anaesthetic.

Operation: The cervix is dilated. A large trocar and cannula are introduced through the cervix and through the lower posterior wall of the uterus into the abdominal cavity. The trocar is withdrawn and a large catheter with many holes is introduced through the cannula and far up into the abdominal cavity. The cannula is withdrawn and a second catheter with many holes is introduced in the same manner. The two catheters are then sewed into the cervix with silk or black nylon. These two catheters are connected to one tube, which drains into a bottle by the side of the bed. After the abdomen is well decompressed slowly over a period of hours, the two catheters are cut off even with the cervix, and allowed to drain into the vagina. These catheters are left in long enough to establish a permanent fistula, which should drain the abdomen indefinitely.

Advantages of this operation are as follows: The vagina can probably be more nearly sterilized than the abdominal wall. No dressings are necessary, except a Kotex or a vaginal pad. Permanent drainage is certainly very much more desirable than repeated taps through the abdominal walls. It might also be stated that there is little or no danger of hemorrhage from this operation, that peristalsis, abdominal breathing, and motions of the body tend to prevent the catheters from being sealed off. There is little chance that the catheters will seal off so tightly that the tracts left by the catheters after they are removed will be fluid tight and not drain the abdomen. Patients with marked ascites from sclerosis of the liver, cancer and other causes often get their most annoying symptoms from abdominal pressure and not from the underlying cause. Quite depressing among these symptoms are change in figure, a sensation of weight, difficult breathing and irregularity of the heart. If these symptoms can be permanently relieved, the patient is much better, physically and mentally, often for a long period of time.

I deeply regret that this operation can not be used in the male. Attention is invited to the fact that we now have metal and plastic tubes that tend to harmonize with instead of fighting the tissues. With one of these tubes it might be practical to drain the male abdomen into the posterior urethra. Permanent drainage through the urethra would certainly be better than repeated tapping through the abdominal wall.

Criticism, both constructive and adverse, is invited, and I will gladly try to answer all questions. It would be most pleasing to me to have my suggestions attacked and thoroughly discussed.

*Read before the annual meeting of the Medical Society of Virginia at Richmond, September 28-October 1, 1952.

XUM

MENTAL HEALTH

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A Statistical Review of Alcoholism As It Effects State Hospitals.*

The whole problem of alcoholism is a very wide one. It effects the individual, the family, the community. Many theories and plans of treatment have been advanced and many types of treatment have been tried in an effort to cope with the problem of alcoholism. This problem has been studied by the Courts, religious organizations and laymen's organizations, as well as by the medical profession and mental hospitals. Clinics have been established for treatment and the alcoholics themselves are making efforts to remedy the situation through their organization of Alcoholics Anonymous. Time alone will prove the results of such activities and research in this field.

In the State of Virginia a large part of the treatment of alcoholics, where they reach the point of need of institutional care, has been in the State Mental Hospitals. Alcoholism is also treated in private mental institutions and in licensed alcoholic treatment homes, but many of these patients are hospitalized in the State Mental Hospitals at some time during their lives.

The percentage of those diagnosed as alcoholism (both with and without psychosis) had a high of 23.0% of all first admissions in 1940, a low of 7.5% in 1944 and closed a 12 year period in 1951 with 15.5%. The ratio to general population of first admissions diagnosed as alcoholism, was at a high point in 1940 of 19.5 per 100 000 and a low of 4.4 in 1944. The 12 year period closed with a ratio of 8.5 per 100,000. The actual number of first admissions of alcoholics in 1940 was 522; in 1944 the number was 119 and 279 in 1951. The graph shows the trend of the first admissions of alcoholics to the State hospitals for the statistical period of 1940 through June 30, 1951.

The average age of first admissions for the 12 year period was 40.7 years. It can be readily seen that such an average age effects materially the economic status of the individual and family and adversely effects the occupational situation as well.

The readmissions show a higher percentage of their number diagnosed as alcoholic than the proportion of first admissions. The high point was 24.7% in 1942 with a low of 12.4% in 1944, with an actual number of 182 in 1942 and 84 in 1944.

The length of time in hospital for those diagnosed as alcoholism without psychosis is normally of short duration. Those discharged with less than 3 months hospitalization ranged from a low of 61.0% in 1944

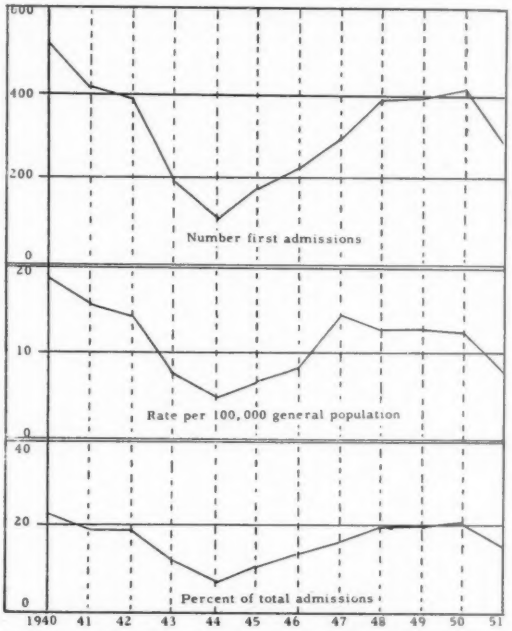

Chart No. 1. Number of first admissions to State hospitals of patients diagnosed as Alcoholsm (with and without psychosis), ratio of first admissions to general population and percentage to total of first admissions for the years 1940 through 1951.

to a high of 84.0% in 1950. (This discharge rate includes those admitted both as first and readmissions). The average length of stay ranged from a low of 4 months to a high of 9 months for the 12 year period of 1940 to 1951. Those diagnosed as alcoholic psychoses discharged in less than 3 months had a low of 40.0% in 1945 and a high of 75.0% in 1950 with an average length of stay in the hospital ranging from a low of 4 months to a high of one year and 4 months for the 12 year period.

The death rate to the number treated is low. There were only 126 deaths for those diagnosed as alco-

*Article by Edna M. Lantz, Statistician, Department of Mental Hygiene and Hospitals.

holism (both with and without psychosis) for the 12 year period.

The resident population of alcoholics at any one time is not large. The largest percentage was 3.4% in 1940. This included both the with and without psychosis diagnosis.

There is no build up of this type of patient in the hospitals; very few have a long hospitalization. The rate of turnover of the number of admissions to discharges is approximately one for one. Even though the stay in hospitals is of short duration, the admission and discharge rate create a time consuming problem for the physicians and staff.

In addition to those diagnosed as alcoholics, the hospitals also have the problem of intemperance with other psychiatric diagnoses. Those having alcoholic habits of intemperance with other diagnoses averaged 6.5% for the 12 year period and those classified as temperate 21.8%.

Economic and general conditions apparent'y have their effect on the number of alcoholics admitted to State hospitals. As shown on the chart, during the war period when jobs were plentiful and many were in the armed forces, the admission of alcoholics to hospitals was low. It was noted that those who were admitted had a low rate of early release, indicating the more severe cases.

Since the change in the commitment laws in 1950, placing the authority of commitment in the trial justice and police courts, fewer alcoholics have been committed to the hospitals. It is presumed that more of them have been placed in jails and sent to the State Farm than before.

What is the right approach in the treatment of alcoholics ? We do not believe that jails, State Farms or the mental hospitals furnish the complete answer. It is the consensus of opinion of many physicians and psychiatrists that the problem is both physical and mental. If this is true, then no lasting results will be effected unless both the physical and mental health of the patient are taken into consideration, fully diagnosed and treated.

In view of the need for a prolonged treatment of very special type, the mental hospitals should be relieved of this problem of alcoholism as such. In many cases the addition of an education and vocational program would also be of assistance in the rehabilitation of an alcoho'ic. In view of these aspects, a special treatment institution should be developed where concentration can be made on this type of patient. This would also alleviate the problem of having to place mental patients and alcoholics in the same wards in the mental hospitals, which is now necessary in too many instances.

What Are Cancer's Warning Signs?

Cancer often betrays itself in its early stages by certain easily noticed signs. For your own good—and for that of every person dear to you—it is important to learn and never forget these warning signs. They are commonly called the *7 Danger Signals of Cancer*. Knowing them (*and acting on their warnings*) has saved many lives and some day may save yours.

The *7 Danger Signals* which may mean cancer are:

1. Any sore that does not heal.
2. A lump or thickening, in the breast or elsewhere.
3. Unusual bleeding or discharge.
4. Any change in a wart or mole.
5. Persistent indigestion or difficulty in swallowing.
6. Persistent hoarseness or cough.
7. Any change in normal bowel habits.

Upon the first appearance of any one of these seven danger signals consult a doctor. Do it right away. Don't wait for pain. That may only appear when cancer is in an advanced stage. Any of the 7 Danger Signals may mean cancer. If you notice any one of them in yourself, go straight to a doctor. If you find that any member of your family or any of your friends have them, urge that they see a doctor at once.

The possibility of cure is very much greater when cancer is discovered and treated in its primary stages. *Delay in seeing a doctor may mean death—for no cancer has been known to cure itself. Untreated cancer is always fatal.*

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PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Influenza and Pneumonia Deaths.

As an indication of disease severity during the recent epidemic of influenza, the National Office of Vital Statistics has published by weeks the number of deaths from influenza and pneumonia occurring in 58 cities with an aggregate population of thirty-five million.

For comparison is shown, in Table II, the number of deaths in Virginia from influenza and pneumonia in January, 1952 and January, 1953 with age distribution.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Feb. 1953	Feb. 1952	Jan.-Feb. 1953	Jan.-Feb. 1952
Brucellosis	3	2	3	9
Diarrhea & Dysentery	70	329	734	208
Diphtheria	9	12	22	29
Hepatitis	185	81	136	429
Measles	465	1883	2827	745
Meningitis (Meningococcic)	31	12	31	60
Poliomyelitis	0	4	8	5
Rocky Mt. Spotted Fever	0	1	2	0
Scarlet Fever	111	95	176	232
Tularemia	2	9	21	10
Typhoid and Paratyphoid	1	6	9	8
Rabies in Animals	46	48	96	96

TABLE I—Deaths From Influenza and Pneumonia by Weeks in 58 Cities

Dec. 20 1952	Dec. 27 1952	Jan. 3 1953	Jan. 10 1953	Jan. 17 1953	Jan. 24 1953	Jan. 31 1953	Feb. 7 1953	Feb. 14 1953	Feb. 21 1953
249	230	291	350	404	463	554	610	596	539

TABLE II—Influenza and Pneumonia Deaths in Virginia

INFLUENZA January, 1952 Age Distribution		INFLUENZA January, 1953 Age Distribution		PNEUMONIA January, 1952 Age Distribution		PNEUMONIA January, 1953 Age Distribution	
0 - 34	6	0 - 34	13	0 - 34	52	0 - 34	49
35 - 44	2	35 - 44	1	35 - 44	6	35 - 44	5
45 - 64	4	45 - 64	13	45 - 64	14	45 - 64	35
65 and over	7	65 and over	28	65 and over	34	65 and over	61
TOTAL	19	TOTAL	55	TOTAL	106	TOTAL	150

New Books.

Below are listed some of the newer books in the Tompkins-McCaw Library of the Medical College of Virginia. These may be borrowed by our readers under usual library rules:

Albert—Selected toxicity. 1951.
Belding—Textbook of clinical parasitology, 2d ed. 1952.
Bell—Renal diseases, 2d. ed. 1950.
Brazier—The electrical activity of the nervous system. 1951.
Cook—Human fertility: The modern dilemma. 1951.
Linksz—Physiology of the eye. Vol. 2—Vision. 1952.
Meschan—An atlas of normal radiographic anatomy. 1951.
Mellon, ed.—Analytical absorption spectroscopy. 1950.
Parmelee—Management of the newborn. 1952.
Rhodes & van Rooyen—Textbook of virology. 2d. ed. 1953.
Ropes & Bauer—Synovial fluid changes in joint disease. 1953.
Sarnat, ed.—The temporomandibular joint. 1951.
Selye—Second annual report on stress. 1952.
Shands—Handbook of orthopaedic surgery. 4th ed. 1952.
Sheldon, et al—A manual of clinical allergy. 1953.
Taylor—The measurement of radio isotopes. 1951.
White, et al.—The autonomic nervous system. 3rd ed. 1952.

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Medical Society of Virginia Cancer Committee

Chairman, George Cooper, Jr., M. D.

Albemarle Hotel Building, Charlottesville, Va.

Reprints of this and preceding Bulletins may be obtained from this office

APRIL 1, 1953

BULLETIN

Wilms' Tumors and Neuroblastomas

Though malignancies in children do not occur in great numbers, such a high percentage of the victims die that cancer, including leukemia and Hodgkin's disease, is one of the leading causes of death from disease in children under fifteen. The ultimate prognosis in some of the more common childhood malignancies such as leukemia, central nervous system tumors, and bone tumors is so gloomy, in spite of constantly more successful palliation, that the hopeful outlook in other common childhood malignancies is often ignored. Unwarranted pessimism can lead to deferred treatment which can lead to unnecessary death.

For instance, retinoblastoma is rarely encountered in any one physician's practice, yet prompt recognition on those rare occasions is vital because 50 per cent of unilateral retinoblastomas, enucleated with removal of as much of the optic nerve as possible, are cured. Even in bilateral retinoblastomas, more can be accomplished than is usually recognized. Reese, in his book "Tumors of the Eye," advises bilateral enucleation if no sight remains. If there is vision in one eye, he advises enucleation of the more severely affected eye plus irradiation of the less severely affected eye. Of 19 patients receiving such treatment, Reese reports six living without recurrence and with vision five years later, and six more living without recurrence but also without vision five years later.

Next to leukemia, the most frequently encountered childhood malignancies are Wilms' tumors and neuroblastomas. The difference that a positive approach can make in these diseases is illustrated by the following two case histories.

1. The parents of a two month old infant noticed a firm mass deep in the left midabdomen. Their physician advised them to watch it and let him know if it enlarged. The growth of the primary tumor was slow and the child was not investigated until it was six months old. By that time, innumerable small metastases were readily demonstrable in skeletal roentgenograms. A presumptive diagnosis of neuroblastoma was made, a diagnosis which was confirmed by bone marrow study and at autopsy two years later after several remissions produced by x-ray therapy.

2. A left abdominal mass was discovered in a six months old infant. Pyelography the following day demonstrated a normal right kidney. The left renal collecting system was severely distorted. Two days later, a left transabdominal nephrectomy was performed. The pathologist confirmed the presumptive diagnosis of Wilms' tumor. Postoperative x-ray therapy was administered to the renal fossa. Two and a half years later, the child is alive and without recurrence.

Arey, in an article on "Cancer in Childhood" in the November, 1952 issue of "The Medical Clinics of North America" comments that neuroblastomas arise from cells destined to form the adrenal cortex and sympathetic ganglia. Therefore they may develop in the cervical ganglia, the retropleural region, or the retroperitonal region, but usually appear in the adrenal cortex, occasionally in the renal parenchyma. Wilms' tumors may arise in the retroperitoneal region independent of the kidney but usually are in the kidney. Unlike kidney tumors in adults, Wilms' tumors frequently do not cause hematuria. *So the presenting complaint with both tumors is usually an abdominal mass.*

Such a discovery is an emergency calling for an investigation of not more than two or three days' duration in preparation for treatment.

As neuroblastomas frequently metastasize to the skeleton and Wilms' tumors to the lungs, skeletal and chest x-ray examinations

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are of prognostic value. Bone marrow studies may reveal invasion by neuroblastoma while the roentgenograms are still negative. However, the discovery of metastases should rarely be allowed to alter plans for surgical removal of the primary tumor.

Pyelograms may offer roentgen evidence of value in differential diagnosis between the two tumors, but this is of little practical value. Pyelograms are important to demonstrate the relation, if any, of the abdominal mass to kidney, and *they are a preoperative necessity for proof of the presence of at least one normal, functioning kidney.*

Metastasis should not be encouraged by frequent or rough palpation of masses suspected of representing one of these leisons.

Preoperative differentiation between the two may be and ofter is uncertain or impossible. But as *the treatment for both is prompt surgery and roentgen therapy,* the accumulation of diagnostic data should not be allowed to postpone treatment.

A transabdominal approach is recommended, even when the pyelogram demonstrates a deformed renal pelvis, to permit ligation of the renal pedicle before the tumor is manipulated.

In occasional neglected cases, the bulk of the tumor may be so great that surgery is impractical until preoperative radiation therapy has partially reduced the mass.

Some urologists and roentgen therapists advocate routine preoperative radiation to reduce the hazard of metastasis during the nephrectomy. Others urge immediate surgery, feeling that postponement of operation to permit preoperative radiation increases opportunity for metastasis. All agree on the value of postoperative radiation of the kidney fossa. If metastases have been demonstrated, these should be irradiated at the same time. And roentgen therapy should be used to treat metastases occurring postoperatively.

Although apparent cures following bone or central nervous system metastases from neuroblastomas occur, they are extremely rare. But *results in less advanced cases are encouraging.* Farber (Am. J. Dis. Child., Sept., 1940) reported ten of 40 patients alive three to eight years after treatment, and Wittenborg (Rad., May., 1950) reported 13 of 23 patients alive three years or longer after treatment, including six patients in whom liver metastases were found when the primary tumor was removed.

As for the Wilms' tumors, Gross and Neuhauser (Ped., Dec., 1950) reported 18 of 38 patients alive and well two years or longer after surgery and postoperative radiation. Since recurrences and metastases, if they are to occur, usually do so within two years after nephrectomy, most of these patients are probably cured.

Results such as these leave no room for pessimism and indecision. A solid abdominal mass discovered in early life should be assumed to represent a malignancy. Properly and promptly treated in an early stage, such tumors, when found by the pathologist to be neuroblastomas or Wilms' tumors, afford a hopeful prognosis.

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THE MEDICAL SOCIETY OF VIRGINIA

Council Minutes

The meeting was called to order at 1:00 p.m., February 19, 1953, by the President, Dr. James L. Hamner. Those attending were Dr. Vincent W. Archer, Dr. John T. T. Hundley, Dr. Mack I. Shanholtz, Dr. Kinloch Nelson, Dr. Lewis H. Bosher, Jr., Dr. A. A. Creecy, Dr. Guy W. Horsley, Dr. Wilkins J. Ozlin, Dr. Louis P. Bailey, Dr. Frank A. Farmer, Dr. Harold W. Miller, Dr. Claude A. Nunnally, and Dr. James P. King.

First on the agenda was consideration of action taken by the Albemarle County Medical Society with regard to a full page Chiropractic advertisement which appeared in a Richmond newspaper on January 4. A letter protesting this form of advertising was sent by the Albemarle Society to the paper's editor.

It was pointed out that since Chiropractors are legally recognized in Virginia, it might be well to seek legal advice. A motion was then made by Dr. Hundley that the matter be referred to Mr. Duval, attorney for The Medical Society of Virginia, and his opinion sought as to what action the State Society might take.

Considered also was an advertisement by T. W. Wood & Sons Seed Co., which praised the beneficial effects of alfalfa seed tea on arthritis, etc. It was mentioned that thus far, little, if anything, is known of any such values contained in alfalfa seed tea, and the consensus was that such companies should remain out of the field of medicine. It was suggested that individual physicians write the company pointing out their objections to such advertising.

An appropriation for legislative expense was considered, and it was explained that the current budget does not provide for the retainer fee of $50.00 per month for Mr. Duval. A motion to appropriate the necessary $600.00 was passed unanimously.

Attention was then given the matter of selecting a time and place for the Annual Meeting of the Society in 1954. White Sulphur Springs (The Greenbrier) and Hot Springs (The Homestead) were considered, as was the possibility of a joint meeting with the District of Columbia Medical Society to be held in Washington (Statler). It was emphasized that if the latter were seriously considered, the Arlington, Alexandria and Fairfax County Medical Societies should first be contacted. Dr. King then moved that the Executive Committee, the President and the Executive Secretary be authorized to investigate and determine the location and dates of the 1954 meeting. The motion passed unanimously.

The following resolution of the Mid-Tidewater Medical Society concerning the care of the Walter Reed Birthplace at Belroi, Gloucester County, was considered:

> Whereas, Drs. H. A. Tabb and R. D. Bowles, members of this society and also members of the Committee of The Medical Society of Virginia which has charge of the Walter Reed Birthplace properties at Belroi, have brought to the attention of the Mid-Tidewater Medical Society the increasing burden, labor and expense of caring for this property, as it should be done, and the inadequate publicity which it enjoys at this time,
>
> And, Whereas, the National Park Service is only 12 miles away at Yorktown, fully equipped and staffed to give the Walter Reed property proper and adequate custodial care and proper restoration and landscaping, in keeping with the importance of the great national personage as Dr. Walter Reed has now become,
>
> Therefore Be It Resolved, 1. That the Mid-Tidewater Medical Society bring this matter to the attention of the Council of The Medical Society of Virginia, and request that steps be taken to arrange for proper care of the property, if feasible with the National Park Service; 2. That efforts be made to preserve and restore the Walter Reed Birthplace as a memorial to this distinguished Virginian in keeping with the great work he accomplished; 3. That a copy of these resolutions be transmitted to The Medical Society of Virginia by the secretary of this society.

The thought prevailed that Mr. Duval's opinion should be sought concerning the advisability of such a step and also what the proper procedure would be. It was then moved that if such action seems feasible after investigation, and if reasonable assurance is had that the National Park Service will preserve and maintain the property as a fitting monument to Walter Reed, the necessary steps then be taken to turn the property over to them. The motion passed unanimously.

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Next on the agenda was the matter of framing and preserving the pictures of past presidents of The Medical Society of Virginia. It was revealed that over ninety pictures have been secured thus far. Estimates received indicated that the cost would be $150.00 for five frames (24 pictures to a frame) or $200.00 for frames and mats. It was moved by Dr. Archer that $200.00 be appropriated for this purpose. The motion carried unanimously.

The following resolution of the Arlington County Medical Society was discussed:

> That the Arlington County Medical Society would like to go on record as opposing the financial backing and, in some instances, the setting up of medical centers by big business and industry, and especially their claim that group practice is far superior to individual or partnership practice, and That members of the Society, in their relations with the press and the public in general, submit through the Board of Censors for clearance, all written or oral statements concerning medical subjects.

It was believed that the resolution deserved further study, and a motion was made to refer the matter to the Ethics Committee with the request that the Committee make its recommendations after consultation with the Council on Medical Service of the A.M.A. The motion carried.

Dr. King suggested that members of The Medical Society of Virginia be given adequate notice of Council meetings in order that those wishing to attend might have that opportunity. It was decided that such notice should be carried in the Virginia Medical Monthly.

Concerning the $25.00 increase in dues for the Conference of Presidents and Other Officers of State Medical Societies, it was moved that an appropriation be made to cover the increase and that the Society's delegates to the A.M.A. look into the value and advisability of continuing membership in the Conference. The motion carried.

The value of having a district council was next considered, and it was brought out that such a council is often the best contact a Councilor has with members in his district. It was moved that the Executive Secretary contact each component society, urging them to elect a member of the district council from each county and city represented in the various societies. The motion carried.

Next on the agenda was the question of sponsoring an exhibit at the 1953 Atlantic Rural Exposition. It was pointed out that first of all, an appropriation in the amount of $205.00 was needed to cover the cost of the 1952 exhibit, since the books were closed prior to the exhibit date in October. A motion to appropriate the needed sum was carried. A further motion that a sufficient sum be appropriated to sponsor a similar exhibit at the 1953 Exposition and also at the meeting of the Virginia Pharmaceutical Association was carried. It was stipulated that the exhibits would be sponsored only upon the advice of the Public Relations Committee. The work of the Woman's Auxiliary in making the 1952 exhibit a success was commended.

Recent increases in mal-practice insurance were discussed, and it was pointed out that several members of the Society had expressed dissatisfaction. The largest increase noted was that for hospitals. It was moved that the matter be referred to the Medical Service Committee for study and any recommendations they might wish to offer. It was also suggested that the Committee investigate the possibility of zone insurance.

Considered next was the matter of exemption from the payment of dues those members of the Society who retire from active practice prior to their seventieth birthday. Although this is left to the discretion of the President, it was believed that perhaps the Judicial Committee should take the question under consideration and study the advisability of recommending a change in the Constitution and By-Laws which would more clearly define the conditions of dues exempt membership.

Dr. Nelson brought up the difficulty encountered by the State Board of Medical Examiners when considering applications of graduates of foreign medical schools to take the State Board examination. It was believed that an advisory committee of The Medical Society of Virginia, appointed for the purpose, might advise the State Board concerning individual applicants and also study the possibility of some type of helpful legislation. At the present time the Board is handicapped when considering graduates of schools behind the Iron Curtain since little information is available concerning those institutions. It was moved and passed that the deans of the two medical schools constitute an advisory committee and associate with themselves such other members of The Medical Society of Virginia as they might wish. The committee would study and sug-

gest possible methods of easing the present difficulty in Virginia.

Dr. King asked for suggestions to stimulate interest in the Woman's Auxiliary over the state, pointing out that the Society has too long neglected one of its best public relations mediums. A motion was made to suggest to the Finance Committee the possibility of financing the Auxiliary program beginning next year. It was further moved that the President of the Auxiliary be invited to attend the meetings of Council and that the Auxiliary be represented at the regular meetings of the House of Delegates. The motion carried.

The importance of working closely with members of the Student A.M.A. was emphasized, and it was suggested that component societies invite the students to attend society meetings when home on vacation. The Executive Secretary was requested to contact the medical schools and arrange to have each member of Council furnished with the names of students in the respective districts.

Dr. Hamner outlined his thoughts concerning the possible setting up of a special committee to confer with the State Department of Health, and also discussed the advantages of a committee to confer with the American Legion, the State Denal Association, and the State Hospital Association regarding pertinent topics of the day, including hospitalization of veterans and non-service connected disabilities.

There being no further business, the meeting was adjourned.

Approved James L. Hamner, M.D., President

Goodwill Gesture

Whenever I receive an announcement from a new M.D., I reply with a note worded something like this: "It was good to get your announcement and to note that you plan to practice here. If I can be of any assistance to you, just call on me. Meanwhile; let me wish you all possible success."

It's surprising how many of these doctors refer cases to my office, even though referrals are not my object and in some instances we've never even met. As one practitioner said: "When I was new here, you were the only man of your specialty thoughtful enough to send me a good-luck note."—M.D., New Jersey

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WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—
MRS. THOMAS N. HUNNICUTT, JR., Newport News
President-Elect—MRS. K. W. HOWARD, Portsmouth
Treasurer—MRS. WM. C. BARR, Richmond
Recording Secretary—MRS. LEE S. LIGGAN, Irvington
Corresponding Secretary—
MRS. F. A. CARMINES, Newport News
Publication Chairman—
MRS. ROBERT H. DETWILER, Arlington

Reports from Auxiliaries.

NORTHAMPTON-ACCOMAC

This Auxiliary held its first meeting of the New Year on January 13th, at luncheon at the Owl Restaurant near Parksley, as guests of Mrs. O. R. Fletcher. Twenty members and one guest were present.

The business meeting followed the luncheon, with the new president, Mrs. John R. Hamilton, presiding and Mrs. H. L. Denoon, Jr., the new secretary, read the minutes of the last meeting.

A tribute of respect in memory of Mrs. E. W. P. Downing and Mrs. J. Mortimer Lynch was read by Mrs. Holland Trower, and the President requested that a copy be sent to the families of Mrs. Downing and Mrs. Lynch.

A review of the history of The Northampton-Accomac Hospital was given by Mrs. W. J. Sturgis, Sr., from its inception to the present time.

Dr. W. J. Sturgis, Sr., had long seen the need of a hospital on the Eastern Shore, especially in emergencies. Mrs. Sturgis gave many names and gifts of the first donors, and told of the untiring work of the hospital auxiliaries in raising funds.

All contributed so generously that finally, on August 17, 1928, the hospital opened with great rejoicing. General Hugh S. Cumming, of the U.S. Dept. of Health, spoke at the opening of the hospital. Since then, the hospital has grown and expanded and, at present, the new wing and nurses home is nearing completion.

At the close of Mrs. Sturgis talk, Mrs. J. H. Hiden spoke her appreciation of Mrs. Sturgis fine report.

Mrs. W. T. Green, Jr., chairman of The Grace Wilkins Holland Memorial gave her report on Room No. 305, which is known as The Grace Wilkins Holland Memorial Room, stating the Auxiliary to date has donated two beds, two bedside tables, one dresser, one comfortable chair, drapes, and two bedside lamps, at a cost of $400.00. The room is to be painted, and the memorial committee plans to buy tray tables, one for each bed, and another comfortable chair.

Mr. Alvin Bradford, business administrator of the hospital gave a detailed report on the rearrangement and operation of the hospital and account of the new plant and the changes to be made for more room and efficiency. A new Children's section will be arranged, and is to be taken care of by The Junior Woman's Club of Accomac.

Some of the new things Mr. Bradford listed are as follows: new elevator, kitchen enlarged, steam pacs for food to be taken to the patients' rooms, new building for the laundry, new water supply, sprinkler system, sewage disposal system, air conditioning for operating rooms, and a third operating room, landscaping of the grounds. He hopes to have the hospital on a sound business basis, and also stated that the new nurses' home should be completed in April, but there is still a shortage of nurses.

Mr. Bradford's report was most interesting and informative, and he was given a round of applause for his very fine year's work and report.

The Auxiliary contributed to The March of Dimes, the 1953 dues were collected, and the meeting adjourned.

CATHERINE R. TROWER,
(MRS. HOLLAND)
Chairman, Press and Publicity.

RICHMOND

On Valentine's Day, February the 14th, the Woman's Auxiliary to the Richmond Academy of Medicine had a Dinner Dance at the Hotel Jefferson to honor their husbands. The husbands were given red carnations as they entered the door. Mrs. William F. Grigg, Jr. was General Chairman for the dance. Mrs. John E. Stevens was Ticket Chairman.

The Auxiliary manned the headquarters of the Richmond Chapter of the Heart Association for the week of February 23rd through February 27th, and furnished 23 volunteers.

At the February meeting, Mrs. Gilman R. Tyler resigned as President-elect and Mrs. Custis L. Coleman, Vice-President was installed as President-elect. Mrs. J. R. Grinels became Vice-President.

JANET F. COLEMAN, *President-Elect*
(MRS. C. L.)

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Alexandria

Mrs. Jerome Baum was hostess to the Auxiliary at her home on January 27, a Tuesday evening. Mrs. Forrest Swisher, president, presided. The by-laws, which have been completely rewritten this year, were read for the final time and were adopted. It was agreed to send contributions to the Leigh-Hodges-Wright Memorial Fund (for Tuberculosis), as has been done in past years, and to the American Medical Education Foundation.

Dr. and Mrs. Daniel Yuter were hosts at their home for the second Auxiliary social of the year on Valentine's Day. Fifty-six turned out for the gala occasion. Each member contributed a favorite recipe, which resulted in a very attractive buffet supper. The doctors seem to especially enjoy these social get-togethers.

MISCELLANEOUS

Program, Virginia Academy of General Practice.

The program for the annual meeting of the Academy in Richmond, May 7 and 8 is given below:

Thursday, May 7

9:00 A.M.—"A.M.A. Representation in Washington" Cyrus H. Maxwell, M.D.—Washington, D. C.

9:40 A.M.—"Infant Feeding"—McLemore Birdsong, M.D.—University of Virginia

11:00 A.M.—"Genital Urinary Infections"—Thomas B. Washington, M.D.—Richmond

11:40 A.M.—"Dental Infections"—Holmes Knighton, D.D.S.—Medical College of Virginia

12:20 P.M.—"Diagnosis and Treatment of Epilepsy"—Randolph Leigh, Jr., M.D.—University of Virginia

3:30 P.M.—Clinical Pathological Conference—
Presentation of Clinical Case: Charles M. Caravati, M.D.—Richmond
Pathological Discussant: G. R. Hennigar, M.D.—Medical College of Virginia

4:30 P.M.—"Diseases of the Pituitary Glands"—Kenneth R. Crispell, M.D.—University of Virginia

Friday, May 8

9:00 A.M.—"The Office Treatment of Fractures"—Milton J. Hoover, Jr., M.D.—Medical College of Virginia

9:40 A.M.—"Toxicology"—Sidney Kaye, M.Sc.—Medical College of Virginia

11:00 A.M.—"Peripheral Vascular Diseases—Non-Diabetic"—James P. Hendrix, M.D.—Duke University Hospital, Durham, North Carolina

11:40 A.M.—"Relation of the Physician in Industry to Those in Private Practice"—R. Lomax Wells, M.D.—C & P Telephone Co.—Washington, D. C.

12:20 P.M.—"Diagnosis of Acute Abdomen"—Charles E. Davis, Jr., M.D.—Norfolk

2:00 P.M.—"Antibiotics"—Count D. Gibson, Jr., M.D.—Medical College of Virginia

3:30 P.M.—"Treatment of Hypertension"—Upshur Higginbotham, M.D. — Bluefield, West Virginia

4:10 P.M.—"The Role of the General Practitioner in Early Diagnosis of Cancer"—John O. Boyd, Jr., M.D.—Roanoke

A cordial invitation is extended to all physicians in Virginia and elsewhere to attend the sessions and it is hoped many from neighboring states will avail themselves of the opportunities and facilities afforded by this annual "gathering of the clan" of General Practitioners.

Woman's Auxiliary—V.A.G.P.

The Woman's Auxiliary of the Virginia Academy of General Practice will meet also at the Hotel Jefferson, Richmond, on May 7 and 8 and a most interesting program has been arranged.

A Luncheon meeting, with election of officers, will be held in the Flemish Room at 1:00 p.m. on Thursday, May 7, at which time Mr. William Tayloe Munford, authority on interior decorating, will be the guest speaker, his topic being "Decorating".

A Card Party, beginning at 10:00 o'clock Friday morning, also in the Flemish Room, will conclude in time to adjourn to the Commonwealth Club for Luncheon, where the ladies will be the guests of Mr. Walter F. Hyer, Medical Service Representative of J. B. Roerig and Company of Chicago.

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BOOKS

Hospital Staff Appointments of Physicians in New York City. Hospital Council of Greater New York. The Macmillan Company, New York. 1951. 151 pages. Cloth. Price $3.25.

Synovial Fluid Changes in Joint Disease. By MARIAN W. ROPES, M.D., Associate Physician, Massachusetts General Hospital, Assistant Clinical Professor of Medicine, Harvard Medical School; and WALTER BAUER, M.D., Chief of Medical Services, Massachusetts General Hospital, Jackson Professor of Clinical Medicine and Director of Robert W. Lovett Memorial Foundation for the Study of Crippling Diseases, Harvard Medical School. Published for the Commonwealth Fund by Harvard University Press, Cambridge, Massachusetts. 1953. xvi-150 pages. Illustrated. Cloth. Price $4.00.

Textbook of Surgery. Edited by H. F. MOSELEY, M.A., D.M., M.Ch. (Oxon), F.A.C.S., F.R.C.S. (Eng.), F.R.C.S. (C), Assistant Professor of Surgery, McGill University; Associate Surgeon, Royal Victoria Hospital, Montreal, Canada. With Foreword by G. GAVIN MILLER, M.D., C.M., M.Sc., F.R.C.S. (C), F.A.C.S., Chairman of the Surgical Department, McGill University; Surgeon-in-Chief, Royal Victoria Hospital. St. Louis, The C. V. Mosby Company. 1952. xxi-896 pages. With 460 Text Illustrations and 46 Color Plates. Cloth. Price $15.00.

Chlorophyll in Medicine. Scientific Background; Clinical Experience in Topical Therapy with Chloresium (ointment and solution-plain). Published by Rystan Company, Inc., Mount Vernon, New York. Pamphlet of 53 pages. May be obtained upon request to publishers.

Studies in Visual Optics. By JOSEPH I. PASCAL, B.S., M.A., O.D., M.D., Director of Eye Department, Stuyvesant Polyclinic; Attending Ophthalmologist, New York Polyclinic Medical School and Hospital, Outpatient Department; Lecturer in Ophthalmology, New York Polyclinic Medical School and Hospital. St. Louis, The C. V. Mosby Company. 1952. 800 pages. Illustrated. Cloth. Price $12.50.

The author succeeded in writing a rather readable and comprehensive outline of physiological optics for students of optometry and of ophthalmology. Although this book contains, according to its preface, not even "a sizeable portion of the material" presented by Dr. Pascal to his classes, its content in the opinion of the reviewer is complete enough to serve as a textbook. The material is presented in an unusual way, which is easily grasped and absorbed by the student. A large number of illustrations, schematic and graphic representations, and hints for memory aid as well as simplifications of some of the usual mathematical formulae increase the value of this book as a student helper. In his attempts to simplify some of the very complicated problems of visual optics, the author might arouse the wrath of some learned physicists or physiologists, but he will be compensated in all probability by the thankfulness of his readers and students.

E. F.

The Oculorotary Muscles. By RICHARD G. SCOBEE, B.A., M.D., F.A.C.S., Assistant Professor of Ophthalmology, Washington University School of Medicine, St. Louis, Missouri. Second Edition. St. Louis, The C. V. Mosby Company. 1952. 512 pages. With 159 Illustrations. Cloth. Price $11.00.

This second edition of Dr. Scobee's book, which was so well received when first published, is considerably enlarged and rewritten in many parts. The fascinating story of the function and dysfunction of the oculorotary muscles is well told and makes the book an excellent text for postgraduate study. A fairly complete subject index is a big help for the reader not yet familiar with the subject, since some expressions, such as "esophoria", "Maddox rod test", etc., are used in early chapters long before an exact definition or description is offered. Although the author recognizes the value of orthoptics as a non-surgical or a pre-operative treatment of heterotropia in some cases, he does not discuss the methods used by the orthoptists since this subject has been recently covered by excellent books. However, the surgical treatment of heterotropia is critically discussed in detail.

E. F.

Correlative Neuroanatomy and Functional Neurology. By JOSEPH J. McDONALD, M.S., M.Sc.D., M.D., Professor of Surgery, Columbia University; etc. And JOSEPH G. CHUSID, A.B., M.D., Attending Neurologist, St. Vincent's Hospital, New York. Sixth Edition. Lange Medical Publications. University Medical Publishers, Los Altos, California. 1952. 263 pages. Price $4.00.

The author's own term, "concise outline format," best describes this volume of "Correlative Neuroanatomy and Functional Neurology". It is compendious, yet completely fulfills the purpose for which it is intended, namely, a quick review for the student in Neurology. This latest revision incorporates newer concepts in the clinical field, as well as excellent additions in diagrams, charts and illustrations; especially the portion on muscle testing.

The reasonable cost belies the wealth of information between the covers, and it could well be a most useful addition to the library of any student of the nervous system.

L.L.J.

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EDITORIAL

Dr. Claude C. Coleman, 1879-1953

DR. CLAUDE C. COLEMAN, one of the pioneers in the development of neurological surgery in this country, died on January 9, 1953, aged 73, in Richmond. Dr. Coleman, son of Frank and Jane Patrick Coleman, was born in Caroline County, Virginia, July 21, 1879. His early education was obtained in the local schools there and he entered William and Mary College in 1896 and two years later was awarded a teacher's certificate. He taught school on the Eastern Shore of Virginia for two years, and then matriculated in the Medical College of Virginia at Richmond, from which institution he received his M.D. degree in 1903. In the first decade after graduation from medical school, Dr. Coleman engaged in the general practice of medicine in

CLAUDE C. COLEMAN, M.D.

Buena Vista, Virginia and obtained graduate training in surgery, for a time working with Dr. J. Shelton Horsley. In 1913, ten years after being graduated from the Medical College of Virginia, Dr. Coleman entered the practice of surgery in Richmond and soon had a wide and diversified general surgical practice. Even during this period he was especially interested in plastic and neurological surgery.

During World War I, Dr. Coleman's interests were concentrated on neurological surgery. He was made chief of the brain surgery school at Fort Oglethorpe, Georgia where he did extensive work in peripheral nerve surgery, operating on numerous patients with nerve injuries, chiefly casualties of the war in France. During the war period he also was associated with Dr. Charles H. Frazier, Professor of Surgery at

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the University of Pennsylvania, in a military hospital in Cape May, New Jersey. He also worked in a similar institution in Staten Island, New York.

Returning to Richmond during the latter part of 1919, Dr. Coleman began his most significant surgical achievement: the organization and development of the Department of Neurological Surgery at the Medical College of Virginia, where he was to carry on his work as Professor of Neurological Surgery for a period of 32 consecutive years. Dr. Coleman also organized a department of neurological surgery at the request of the Dean of the medical school of the University of Virginia in Charlottesville and served as clinical professor of Neurological Surgery in that institution from 1937 to 1941. He thus concretely implemented his long-felt desire to establish departments of neurological surgery in the two medical schools in Virginia. In all, he held four professorships in the two medical schools in Virginia, during his active surgical career. In addition to the two mentioned, he was elected in 1912 to the Professorship of the Principles of Surgery, and in 1913 to the Professorship of Oral Surgery and Anesthesia, both in the Medical College of Virginia. In 1951 he retired and was appointed Neurosurgical Consultant to the Medical College of Virginia Hospitals, which position he retained until his death. At the time of his retirement from active surgical practice in 1951, Dr. Coleman had taught a total of 44 years in public and private schools, and in the medical schools.

He was a member of numerous important surgical and neurological societies including the Society of Neurological Surgeons (President in 1929), the American Neurological Association, the Southern Surgical Association, the American College of Surgeons, the Seaboard, Norfolk and Western (President), and Chesapeake and Ohio Railroad Surgeons' Associations, the Southeastern Surgical Congress, the American Medical Association, The Medical Society of Virginia and the Richmond Academy of Medicine. He was president of the last named organization in 1925. In 1943, he was elected an honorary member of the Harvey Cushing Society.

In his later years, many well-deserved honors came to Dr. Coleman. He was appointed to the Board of Visitors of William and Mary College on April 24, 1941 and served on that board until 1950. He also received the Alumni award and the honorary degree, Sc.D. from that school. The honorary Sc.D. degree also was conferred upon Dr. Coleman by the Medical College of Virginia in June 1951, at the time of his retirement from the Professorship of Neurological Surgery. He was a member of the Founders' Group of the American Board of Surgery and served as an examiner for the American Board of Neurological Surgery from its inception in 1940 to 1949. Perhaps his happiest and proudest moment was in May 1949, when all of his former neurosurgical residents, occupying important posts throughout this country, assembled to honor him on the completion of his thirtieth year as Director of Neurological Surgery at the Medical College of Virginia. A number of his neurosurgical contemporaries from Boston, Baltimore, San Francisco and the Mayo Clinic also took part in this celebration in honor of Dr. Coleman. In September 1951 his former residents presented his portrait to the Medical College of Virginia at an impressive ceremony in the Baruch Auditorium. This portrait now hangs in the auditorium of the Medical College of Virginia Hospital. In World War II, he served as Civilian Consultant in Neurological Surgery to the Surgeon-General and in 1946 he was named as neurosurgical consultant to the Special Medical Advisory Group of the Veterans' Administration, which met at frequent intervals in Washington D. C., and in which capacity he served through 1952.

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His medical writings were models of clarity in simple yet forceful language.

This note should not close however, without a word concerning Dr. Coleman's outstanding characteristics as well as reference to his significant contributions, to his chosen specialty. In his practice he combined the art and the science of medicine to an unusual degree.

His contributions toward the diagnosis and treatment of injuries to the head, spine and peripheral nerves along with his clarification of facial nerve lesions were outstanding and may well be considered his most important achievements. His excellent results in the treatment of brain abscesses and tumors, Meniere's disease and other neurosurgical lesions also are well known.

To have known Dr. Coleman during his active neurosurgical career was a unique and rewarding, indeed an unforgettable experience. He had an unusual capacity to inspire loyalty and devotion in his residents, his medical colleagues and his patients. Such loyalty and devotion was the natural result of his complete sincerity. Dr. Coleman had an infectious sense of humor and was a raconteur of more than ordinary talent. Tales of his many unique mannerisms and anecdotes of his effective methods for dealing with patients and other individuals are legendary and are fondly recounted whenever two or more of his former associates, residents or interns meet. His diagnostic skill, his operative boldness or conservatism, as the individual case demanded, the excellence of his surgical judgment coupled with his genuine interest in his patients' problems were significant characteristics throughout his surgical career. His interest in his residents and in their careers was genuine and was sustained. Like Osler, Dr. Coleman was the "Young Man's Friend" and he furthered their careers to the best of his ability.

Dr. Coleman was married three times. In 1917 he married Julia Langhorne Cone and to them were born four children, three daughters and a son, C. C. Coleman, Jr., who is following in his distinguished father's footsteps. His first wife died in 1927 and in 1931 he married Ruth Threadcraft Putney, who died in 1945. In 1948 he married Constance Gooding Cardozo, who survives him, together with his four children, three stepsons and seven grandchildren.

Ten days after Dr. Coleman's death, in the same month, another grandson was born who was appropriately named Claude Coleman Sloan, thus doubly insuring the continuation of his name.

The opinions of Dr. Coleman's career and achievements by highly observant laymen including Virginia's two distinguished United States Senators, express the epitome of his accomplishments, perhaps better than this could be done by his medical colleagues. At the time of Dr. Coleman's death, Senator A. Willis Robertson, a friend of Dr. Coleman's since early manhood when they were both practicing, the one law, the other medicine, in Buena Vista, Virginia (1908-9), telegraphed the family as follows: "Dr. Coleman's eminence in his profession was due primarily to two factors, first, an unusual and extraordinary capacity for friendship, combined with the excellent and outstanding quality of his professional work." Senator Harry F. Byrd on the occasion of the celebration for Dr. Coleman said " . . . he is the personification of all those qualities which make our nation great."

J. M. Meredith
I. A. Bigger
F. S. Johns

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SOCIETIES

Wise County Medical Society.

In spite of a stormy night and it being the height of the flu epidemic, twenty-two doctors enjoyed a steak dinner and a lecture by Dr. John Paul Urban of Norton on "Treatment of Diabetes," at the February meeting. The picture "Without Fear" was also shown. The following were elected officers for the ensuing year: President, Dr. B. C. Henson, Roda; vice-presidents, Dr. R. N. Shelley and Dr. Lewis Ingram, both of Norton; and secretary-treasurer, Dr. Thomas J. Tudor of Norton, re-elected.

The matter of a Cancer Detection Clinic was discussed and it was decided to have Dr. George Cooper of Charlottesville speak to the Society at its next meeting. It is expected that a diagnostic center will be organized at Norton. Approval of a blood bank at Norton was also given. Applications were presented for two new members who will be voted on at the next meeting to be held on the second Wednesday in April.

Mid-Tidewater Medical Society.

The regular quarterly meeting of this Society was held at West Point on January 27, at which time Dr. William H. Hosfield of that place was installed as president. Following the business session, papers were presented by Dr. Dean B. Cole of Richmond on "Chest Diseases and Changes in Treatment", and by Drs. Frank Johns and D. D. Talley, Jr., also of Richmond, on "A Case Report of Intestinal Obstruction with a Gallstone".

An interesting program on Public Relations, held with the West Point Kiwanis Club at their regular dinner meeting, featured an address by Dr. Vincent Archer, president-elect of The Medical Society of Virginia. Dr. Archer gave a detailed account of the efforts being made by organized medicine in the best interests of the people for their protection, information and health.

The next meeting of the Society is to be held on the fourth Tuesday in April at Urbanna.

Rockingham County Medical Society.

The officers of this Society for 1953 are: President, Dr. E. B. Miller, of Elkton; vice-president, Dr. J. C. Harshbarger, Harrisonburg; and secretary-treasurer, Dr. Clifford T. Riddel, Jr., Bridgewater.

The Tri-County Medical Society

Held its regular monthly meeting at Sunbury, N. C. on January 27th. After a social hour and dinner, Dr. Archie Eagles of Ahoskie, N. C., presented a paper on "Cardiac Emergencies". During the business session the following officers were re-elected to serve for the coming year: President, Dr. T. A. Morgan, Franklin; Vice-president, Dr. W. Holmes Chapman, Jr., Suffolk; Secretary-treasurer, Dr. W. N. Eddy, Suffolk.

The Lynchburg Academy of Medicine

Held its regular monthly meeting at a dinner on February 9. Dr. Robert Moss, Professor of Obstetrics and Gynecology at the University of North Carolina, spoke on "Maternal Morbidity and Mortality". No business was discussed at this time. Dr. C. E. Keefer is president and Dr. Frank N. Buck, Jr., secretary.

NEWS

The World Medical Association,

In conjunction with the Pan American Medical Association, will hold its first Western Hemisphere Conference at Richmond, Virginia, April 23-24. Dr. Louis H. Bauer, Secretary-General of The World Medical Association, writes very fully of this meeting in the Guest Editorial in this issue of the Monthly. We feel honored in having the meeting in our midst.

Pictures of Past Presidents Wanted.

Several years ago, The Medical Society of Virginia collected pictures of its past presidents for display at its 100th Anniversary meeting. The Council has now authorized the office to frame these pictures so they may be preserved for the future. Some of the pictures are still missing, and it is hoped our readers may be able to help us obtain these. Those missing are listed below with the year they served as president:

1849—Name of President Unknown
1855—Dr. H. C. Worsham, Dinwiddie
1857—Dr. James Bolton, Richmond
1874—Dr. Alfred G. Tebault, London Bridge
1883—Dr. William D. Cooper, Morrisville

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1885—Dr. Samuel K. Jackson, Norfolk
1889—Dr. Elhannon W. Row, Orange
1896—Dr. William L. Robinson, Danville
1898—Dr. Lewis E. Harvie, Danville

Perhaps you know some of the families of these doctors who may have pictures of them. If you are able to obtain a picture, send it to the Society at 1105 West Franklin Street, Richmond. It will have the best of care and will be returned as soon as a print is made.

The Virginia Diabetes Association

Will hold its annual scientific meeting in Richmond, beginning at 9:00 a.m. on Wednesday, May 6, at the Hotel Jefferson, on the day preceding the annual scientific assembly of the Virginia Academy of General Practice.

Dr. Collins D. Nofsinger of Roanoke, President of the Association, will be in charge of the program which, arranged by Dr. Thomas S. Edwards of Charlottesville, will include papers on the following subjects:

"The Management of the Obese Diabetic"—Drs. Frank A. Wade and H. St. George Tucker—Richmond
"Clinical Symptoms Associated With Kimmelstiehl—Wilson's Syndrome"—Dr. James B. Hutcheson, III —Roanoke
"Choosing Insulin For The Diabetic"—Dr. Wm. R. Jordan—Richmond
"Common Errors In Therapy"—Dr. H. B. Mulholland, *Vice-President, American Diabetes Association*—Charlottesville
PANEL DISCUSSION ON "THERAPY":
Panel Members: Robert C. Crawford, M.D., Roanoke
William R. Jordan, M.D., Richmond
H. B, Mulholland, M.D., Charlottesville
George S. Grier, III, M.D., Newport News

Virginia Chapter, American College of Chest Physicians.

Continuing its custom begun in 1952, this Society will hold its annual scientific meeting at the Jefferson Hotel, Richmond, at 1:30 p.m., May 6th, these two meetings adding interest to those attending the meetings of the Virginia Academy of General Practice the following days.

The papers to be presented will be:

"The Total Approach To The Diagnosis of Tuberculosis"—Carl W. La Fratta, M.D., Richmond
"The Treatment of Chronic Bronchitis"—W. LeRoy Dunn, M.D., Washington, D. C.
"Primary Cancer of the Lung"—Frank Philip Coleman, M.D., Richmond

Virginia Academy of General Practice.

Plans are virtually complete for the third annual Scientific Assembly of the Academy at Hotel Jefferson in Richmond on May 7, immediately following meetings on May 6th of the Virginia Diabetes Association and the Virginia Chapter, American College of Chest Physicians. Dr. E. E. Haddock of Richmond will preside.

Business and committee meetings, during luncheons, etc., will occupy portions of the two-day gathering of the VAGP, which will begin with registration, from 8:00 to 9:00 a.m., on Thursday May 7.

The business meeting, with election of officers, directors and delegates to the Congress of Delegates of the American Academy of General Practice, and annual reports from officers and committee chairmen, will be held at Luncheon, from 1:00 to 3:00 p.m., on Thursday, May 7. The day will be concluded with a Cocktail Party at 6:30 p.m., when the Academy members, their wives and guests will be guests of Van Pelt and Brown, Inc. This will be followed by a Banquet and Dance at 7:30, the guest speaker for the Banquet being Dr. John S. De Tar of Milan, Michigan, of the American Academy of General Practice. A floor show and dance will follow.

Between 50 and 60 pharmaceutical and surgical supply houses will be represented with exhibit booths and a cordial invitation is extended to all to visit these. A large group of Richmond members are actively working toward what appears will be the "biggest and best" Assembly yet held and toward making all in attendance feel "at home" and have a good time.

The complete scientific program appears on page 239 of this issue.

To Organize A Clinic Unit.

Dr. George Zur Williams, professor of pathology and director of the tumor clinic at the Medical College of Virginia, Richmond, has been granted a one-year leave of absence to organize a clinical pathology department at the National Institute of Health at Bethesda, Maryland. He will leave the first of July to establish the department in a recently completed 500-bed clinical center at Bethesda but he expects to make frequent trips to Richmond to continue his cancer research work here.

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Scientific Exhibits for Roanoke Meeting.

The Scientific Exhibit Committee of The Medical Society of Virginia is now receiving applications for space at the annual meeting in Roanoke, October 18-21. The scientific exhibits have, in the past, formed a most significant part of the Society's scientific sessions, and the committee is particularly interested in exhibits of a scientific or teaching nature that would appeal to the general practitioner. All members having material of interest should apply for space and it is hoped they may ask for a minimum space that could serve their purpose.

Applications should be made on forms furnished by the Society. Write Dr. Allen Barker, 603 Medical Arts Building, Roanoke, Virginia, for these and return them to him when completed. Applications must be in by July 1st.

Dr. William Cralle Brann,

South Boston, an alumnus of the class of '27, University of Virginia, has been appointed marshal of Acca Temple Shrine for 1953. Dr. Brann received his Scottish Rite degree in November 1945.

Tumor Clinics in Virginia.

With the hope that it might be helpful for the doctors of the State, we publish a list of the Tumor Clinics of the State, brought up to date, with the addresses, names of Directors and times of meetings.

TUMOR CLINICS

ALEXANDRIA:

McCluer Tumor Clinic—Dr. Alvin C. Wyman, Director, Community Health Center, 218 South Columbus Street, Alexandria, Virginia
New Cases—Friday, 9:00 A.M.
Old Cases—Friday, 11:00 A.M.

BRISTOL:

Bristol Memorial Hospital, Tumor Clinic—Dr. George McCall, Director, Bristol, Tennessee
Friday, 2:00 P.M.

CHARLOTTESVILLE:

McIntire Tumor Clinic—Dr. Vincent Hollander, Director, University of Virginia Hospital, Charlottesville, Virginia
New Cases—Wednesday, 10:00 A.M.
Old Cases—Thursday, 2:00 P.M.
New gyn. cases—Tuesday, 10:00 A.M.
Old gyn. cases—Wednesday, 2:00 P.M.

CLIFTON FORGE:

Chesapeake and Ohio Tumor Clinic—Dr. J. M. Emmett, Director, Chesapeake and Ohio Hospital, Clifton Forge, Virginia
Thursday, 1:30 P.M.

DANVILLE:

Memorial Hospital Tumor Clinic—Dr. J. W. Hooker, Director, Memorial Hospital, Danville, Virginia
Thursday, 10:30 A.M.

EASTERN SHORE:

Eastern Shore Tumor Clinic—Dr. John R. Mapp, Director, Northampton-Accomack Memorial Hospital, Nassawadox, Virginia
2nd and 4th Wednesdays—12:30 P.M.

LYNCHBURG:

Lynchburg Tumor Clinic—Dr. Joseph Houck, Director, Dr. John Devine, Jr., Director, 509 Allied Arts Building, Lynchburg, Virginia.
Tuesday, 2:00 P.M., Lynchburg General Hospital

NORFOLK:

Diagnostic Tumor Clinic—Dr. W. B. Wiley, Director, 221 West Bute Street, Norfolk, Virginia
Wednesday, 2:00 P.M.
Tuesday, 1:30 P.M.—Gyn. patients

RICHLANDS:

Try-County Tumor Clinic—Dr. George Vermilya, Director, Clinch Valley Hospital, Richlands, Virginia
New Cases—Thursday, 10:00 A.M.
Old Cases—Thursday, 2:00 P.M.

ROANOKE:

Jefferson Hospital Tumor Clinic—Dr. Alfred P. Jones, Director, 1301 - 1321 Franklin Road, Roanoke, Virginia
Monday through Friday 9:00 A.M. to 3:00 P.M.

Memorial and Crippled Children's Hospital Tumor Clinic—Dr. H. Rowland Pearsall, Director
Tuesdays—1:00 P.M.

RICHMOND:

Medical College of Virginia Tumor Clinic—Dr. Arthur B. Gathright, Jr., Director, 1200 East Broad Street, Richmond 19, Virginia
Tuesday—General, 8:30 A.M.
Wednesday—Gyn., 8:30 A.M.
Thursday—Head and Neck, 8:30 A.M.
Friday—G. U., 12:00 Noon

SUFFOLK:

Louise Obici Memorial Hospital Tumor Clinic—Dr. Lawrence J. Stetson, Director
2nd and 4th Tuesdays—4:00 P. M.

Virginia Host to National Conference on Rural Health.

More than 600 representatives of medical, agricultural, university extension services and other groups attended the Eighth National Conference on Rural Health in Roanoke, February 27-28. This was the largest attendance in the history of the Conference. Forty-two states and the District of Columbia were represented.

The two day program was woven about the theme

"Widening the Highways to Health", and featured many of the outstanding speakers in the rural health field.

Dr. Louis H. Bauer, President of the American Medical Association, emphasized the necessity of each community making a concerted effort to bring the highest standards of medical care to their area. "No one organization can do the job by itself", said Dr. Bauer. "It requires a community effort."

"One of the difficulties in the past has been the developing of some means to attract physicians to those regions lacking them. A physician who has spent 8 to 13 years of his life in being trained to practice modern medicine is not willing to settle in an area where there are no facilities for practicing such a type of medicine. Increasing the number of physicians will not do it, as they would still tend to congregate in cities.

"In some states, the problem has been solved by the community providing medical facilities and then permitting the physician to rent those facilities or to buy them through gradual amortization. Where this has been done, physicians have been obtained."

He also pointed out that in these days of good roads and automobiles a physician can cover a wider territory than before, and is able to take care of more people.

"Every community does not need a hospital so long as one is available within a reasonable distance and good roads lead to it", he added.

Virginians appearing on the program were Dr. James L. Hamner, President of The Medical Society of Virginia, Dr. Paul D. Sanders, Editor of the *Southern Planter,* Earl J. Shiflet, State Deputy of the Virginia Grange, and Miss Janet L. Cameron, nutrition specialist of V.P.I. Agricultural Extension Service.

News from the State Health Department.

Dr. Paul J. Christenson resigned as Health Officer of Alleghany-Bath-Highland Health District on March 15, 1953.

Dr. Walter Johnson retired as Health Officer of Fauquier-Prince William-Rappahannock Health District on April 1, 1953. He was replaced by Dr. L. T. Giles.

American Psychiatric Association.

The annual meeting of this association is to be in Los Angeles, California, May 4-9, under the presidency of Dr. D. Ewen Cameron, of Montreal Canada. Dr. R. Finley Gayle of Richmond, Virginia, is secretary. The association has a membership of 7,200 persons in the United States and Canada and it is expected there will be an attendance of 3,500 with their wives at this meeting.

Surgeons' Hall of Fame Planned by International College of Surgeons.

Upon the suggestion of Dr. Max Thorek of Chicago, founder and secretary-general of the Internation College of Surgeons, the Board of Trustees of the College voted to accept his suggestion and proceed with the plan of having a Surgeons' Hall of Fame in their new building which has been purchased next door to their present offices on Lake Shore Drive in Chicago. It is planned to have individual niches in this building for busts of the great surgeons to be commemorated, together with special lighting and bronze plaques detailing their contributions to human welfare. Those honored will be chosen by vote of an electoral college, with representatives from every part of the world. Dr. Rudolph Nissen of the University of Basel, Switzerland is chairman of the Board of Trustees of the College, and Dr. Morris Fishbein of Chicago is co-chairman.

The American College of Allergists.

The annual conclave of the College will be held this year at the Conrad Hilton Hotel in Chicago April 24 to April 29.

The first four days will be devoted to instruction under the tutelage of recognized authorities and the last three to a discussion and reporting of recent advances in the field of allergy by the investigators themselves. For detailed information write The American College of Allergists, La Salle Medical Building, Minneapolis 2, Minnesota.

Dr. Galen G. Craun

Has been elected new president of the Harrisonburg (Va.) Rotary Club and will take office July 1.

A Conference on Diabetes and Its Complications

Is to be held on Friday, April the 17th in the Medical School Auditorium (basement of Medical School) at the University of Virginia, Charlottesville. Physicians who have not registered should do so promptly, addressing the office of the Dean, School of Medicine at the University.

The program starts at 9:00 a.m. and lasts until late afternoon, with morning and afternoon intermissions

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in addition to time for lunch. The first feature will be an Introduction and Welcome by Thomas H. Hunter, M.D., new Dean of the School of Medicine, after which talks will be given on

Some Fundamental Principles of Carbohydrate Metabolism—D. R. H. Gourley, Ph. D.

Office Management of Diabetes Mellitus—H. B. Mulholland, M.D.

The Clinical Use of Insulin—Arthur H. Colwell, M.D., Chicago

Treatment of Diabetic Acidosis—K. R. Crispell, M.D.

Renal, Retinal and Neural Complications of Diabetes—T. S. Edwards, M.D.

The Action of Insulin—Charles H. Best, M.D., Toronto

Diabetes and Pregnancy—Wm. N. Thornton, Jr., M.D.

Diabetes and Arteriosclerosis—William Parson, M.D.

Surgical Complications of Diabetes Mellitus—W. R. Sandusky, M.D.

These talks will be followed by a Question and Answer Panel with Dr. Mulholland as Moderator.

American Board of Obstetrics and Gynecology.

The next scheduled examinations, Part II (oral and pathological), for all candidates will be held at The Edgewater Beach Hotel, Chicago, by the entire Board from May 17 through May 24, 1953. Formal notice of the exact time of each candidate's examination will be sent him several weeks in advance of the examinations.

Applications for Certification for the 1954 (Part I) examinations are now being accepted, and candidates are urged to make such application sometime in August or September. This would be of great help in expediting processing of these applications.

Requests for Applications for Appraisal of Incomplete Training Applications for Certification, current Board Bulletins, and Preceptorship or Supplemental Training Forms should be made to: Robert L. Faulkner, M.D., Secretary, American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

The Eastern States Health Education Conference

Of the New York Academy of Medicine will be held on Thursday and Friday, April 23rd and 24th, 1953. The program will include four sessions and an evening dinner meeting on Thursday evening.

The subject of this year's Conference will be *The Sociology of Health Education.*

In this program the sociologist, the anthropologist, and the social psychologist will analyze from the vantage point of their respective disciplines the functions of health education, with special emphasis on the problems of *Communication.*

Participation in the Conference is limited. Those interested in the Conference should address themselves to Dr. Iago Galdston, The New York Academy of Medicine, 2 East 103 Street, New York 29, N. Y.

Over the Top for Hospital Expansion.

Employees of Eli Lilly and Company went over the top in their recent campaign for contributions to the hospital-expansion fund in Indianapolis. The Lilly employee pledges, averaging $40.50 per person, will provide forty-eight critically needed new hospital rooms in Indianapolis.

The first project to be financed by the fund will be a new 300-bed east-side Community Hospital at an estimated cost of $4,800,000. Other projects planned include a new 100-bed Norways Foundation Hospital; added facilities for 104 beds at St. Francis Hospital; and addition of 224 beds and added nurses' residence facilities at Methodist Hospital.

Parke, Davis and Company Awarded Certificate

The American Institute of Management, which makes a continuing study of over 3,000 companies in all industries, has awarded a "certificate of management excellence for the year 1952" to Parke, Davis & Company.

The institute head said "This signifies that your company has achieved a degree of management excellence that is worthy of emulation by all companies concerned with the improvement of management operations throughout the country."

The Southeastern Allergy Association

Will hold its next meeting at the Andrew Jackson Hotel, Nashville, Tennessee, May 15 and 16, under the presidency of Dr. Clarence S. Thomas of that city.

For further information, write the secretary, Dr. Katharine B. MacInnis, 1515 Bull Street, Columbia, South Carolina.

The First World Congress on Fertility and Sterility,

Sponsored by The International Fertility Association in conjunction with The American Society for the Study of Sterility, will be held in New York City, May 25-31, at the Henry Hudson Hotel, immediately preceding the A.M.A. meeting. Owing to the fact that there will be seat limitations, it is

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strongly urged that advance registration be made to insure reservations. Address Chairman, Arrangements Committee, World Congress on Fertility and Sterility, 1160 Fifth Avenue, New York 29, N. Y.

Rocky Mountain Cancer Conference.

Knowing that many doctors from all parts of the country planning July vacations like to include a few days in Colorado and arrange dates so as to include some medical meeting, Mr. Harvey Sethman, Executive Secretary of the Colorado State Medical Society, calls attention to the fact that the Seventh Annual Rocky Mountain Cancer Conference will be held in Denver on July 8 and 9. As in previous years there will be eight outstanding guest speakers, and on the first evening a banquet and entertainment for both the doctors and their ladies. There is no registration fee for this Conference and a warm welcome will await any of our members.

Dr. McCormick's Inaugural to Be Broadcast Nationwide.

The presidential inaugural address of Dr. Edward J. McCormick will be broadcast nationwide on Tuesday evening, June 2. The program will originate from the Commodore Hotel, New York, during the AMA's 102nd annual meeting. Immediately following the ceremony, a reception honoring the new president will be held in an adjoining ballroom.

Schering Award for Medical Students.

The Schering Award competition for 1953, in the nation's medical schools, seeks to encourage original reporting, in the hope that the students will later contribute substantially to the development and communication of knowledge throughout the medical profession. Three $500 prizes will be awarded for the papers judged most distinctive by a panel of leading medical authorities on the subjects covered. Other awards will be arranged for meritorious papers where several apply from same school.

Titles of the three general topics are: antihistaminic treatment of upper respiratory allergies and infections; hormone therapy of the degenerative diseases; and new concepts in the treatment of peptic ulcer.

The deadline for entry forms specifying the title chosen by the student is July 1. The actual manuscript must be postmarked by October 1.

All students duly matriculated in medical schools in the United States and Canada, including those who have participated in previous competitions, are eligible. Manuscripts are limited to 5000 words.

Information and instructions for the competition in 1953 are available from Schering Corporation, 2 Broad Street, Bloomfield, New Jersey.

The Virginia Society of Anesthesiologists.

At its annual meeting held in Richmond, March 7, 1953, the following officers were elected: President, Dr. Harold F. Chase, Charlottesville; Vice-president, Dr. W. E. Pembleton, Richmond; and Secretary-Treasurer, Dr. John L. Rosenthal, Norfolk.

For Sale to Settle an Estate.

Mobile X-Ray Department. Sacrificed at $1,500.00 1—G.E. Model D X-Ray Unit like new; 1—14x17 Cassette good par speed screens; 1—8x10 Cassette good par speed screens; 1—Portable Buck; 1—Fluorescent Illuminator; 1—Kodak safe light; 1—3-gal. three compartment Developing tank, and interval timer.

Also 1—Scanlan-Morris Battery Sterilizer consisting of: Autoclave 12x24; Water Sterilizers (Hot and cold) 5-gal. capacity; Instrument & Utensil Sterilizer 20x24; Electrically operated on 230 v. Power. Good condition—approximately twelve to fifteen years old. $500.00. Write Mrs. R. C. Fravel, Woodstock, Va.

OBITUARIES

Dr. Robert W. Holley

Of Appalachia, died February 11, of a cerebral hemorrhage, after an illness of some time. He was born on June 14, 1877 in Washington County, Virginia, and graduated in medicine from the Medical College of Virginia in the class of '99. He was a member and past president of the Wise County Medical Society, and a member of his State and the American Medical Associations, as well as several fraternal and civic organizations. In 1949 he was made a Life member of The Medical Society of Virginia. His wife and two daughters survive him.

XUM

Dr. Joshua Warren White,

A leading physician of Norfolk, died March 4 in Palm Beach, Florida, where he was spending a vacation. A native of Charlotte County, he was 77 years of age and graduated from the Medical College of Virginia in 1901. He interned at St. Vincent's Hospital, Norfolk, after which he located in that city and had always taken a prominent part in the activities of that city. During World War I he served in the Army Medical Corps and was chief of the ophthalmological department at a hospital in France. He was a past president of the Norfolk County Medical Society and was a member of The Medical Society of Virginia, of which he was made a Life member in 1951. He was on the ophthalmological and otolaryngological services of all the Norfolk hospitals. His wife and a son survive him.

Dr. Forrest McLean Bennett,

A practicing physician in Richmond for the past 36 years, died February 14. A native of North Carolina, he was sixty-five years of age and a graduate of the Medical College of Virginia in 1914. After an internship at St. Elizabeth's Hospital, he located in this city. He was a member of his local and State medical societies and of the American Medical Association. He was a Mason and a Shriner. His wife and a son survive him.

Dr. William Wingfield Wilkinson,

Widely known physician of LaCrosse, died February 23, at nearly 75 years of age. He was a graduate of the former University College of Medicine, Richmond in 1901, and had practiced in Brunswick and adjoining counties ever since. He was on the Board of Visitors of the Medical College of Virginia for a number of years, and had taken an active part in the civic and religious work of his community. He was also a Mason. He is survived by his wife and two children.

Resolutions Concerning Death of Dr. J. G. Davis.

The Roanoke Academy of Medicine adopted the following resolutions on death of Dr. J. G. Davis of that city:

Dr. J. G. Davis, Roanoke's oldest practicing physician, died Saturday night, January 31, 1953. He was 89 years of age.

Often called Roanoke's last horse and buggy doctor, Dr. Davis had practiced in Roanoke since 1905. He was always very active and had been making calls until he became sick about two days ago. Dr. Davis devoted most of his time to his practice and his only two affiliations were the Knights of Pythias and the Episcopal Church.

Dr. Davis was graduated from the Medical College of Virginia in 1885 and was a member of the first class to take the Virginia State medical examinations. He practiced medicine in West Point and Boones Mill and in Montgomery County before coming to Roanoke.

When he first came here, he made calls with a horse and buggy. About 1909 he bought a Model-T Ford in which he made his calls at any time of night or day. He had five sons, a grandson, granddaughter and brother who also were graduated from the Medical College of Virginia, making nine members of the Davis family who were graduated from the medical school.

Surviving are: four sons, Dr. Paul Davis, Dr. Fred Davis, Dr. Algie Davis and Dr. Hal Davis, Roanoke; a daughter, Mrs. R. E. Paine, also of Roanoke; 17 grandchildren and 16 great grandchildren.

WHEREAS, the medical profession and our entire community has sustained a great loss in the death of our esteemed colleague, Dr. J. G. Davis, be it

RESOLVED: that we, the members of the Roanoke Academy of Medicine extend to his family our deepest sympathy.

BE IT FURTHER RESOLVED: that these resolutions be embodied in the minutes of the Roanoke Academy of Medicine and copies sent to his family and to The Medical Society of Virginia.

B. P. SEWARD
GEORGE B. LAWSON
K. D. GRAVES, *Chairman*